

THE PSYCHOLOGY
OF THE PRE-SCHOOL CHILD

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THE MENTAL AND PHYSICAL WELFARE OF THE CHILD

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LONDON S. W. PARTRIDGE & CO, LTD

THE
PSYCHOLOGY OF THE
PRE-SCHOOL CHILD

BY

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LONDON

P. S. KING & SON, LTD.,
ORCHARD HOUSE, WESTMINSTER

Originally published by Messrs. PARTRIDGE in 1929.

CONTENTS

CHAP		PAGE
I.	THE INSTINCTS OF THE CHILD .	9
II.	THE DEVELOPMENT OF PERCEPTION	43
III.	THE THINKING OF THE CHILD	61
IV.	INFANTILE EXPERIENCE	89
V.	THE TODDLER	110
VI.	PLAY	134
VII.	LANGUAGE LEARNING	153
VIII	THE CHILD GUIDANCE CLINIC	173
IX.	THE NURSERY SCHOOL	191
X.	INTELLIGENCE TESTS	212

PREFACE

The great importance of the study of the pre-school period of the child's life is now fully recognised. In a recently published volume of the Home and School Library, on "The Mental and Physical Welfare of the Child," Prof. Arnold Gesell, the Director of the Psycho-Clinic in Yale University, contributed a chapter on "The Mental Hygiene of the Pre-School Child," in which he strongly emphasised the necessity of paying far more attention to the mental side of early development, and the danger of concentrating exclusively on the physical welfare of the child.

In the present volume, Dr Drever has given, in the first three chapters, an admirable account of the fundamental psychological principles involved in the study of the pre-school period, and Miss Margaret Drummond, from her wide practical experience and valuable investigations of the young child, illustrates the way in which these principles find expression in the different stages of development. This clear statement in popular language by such distinguished experts will prove of the greatest possible value to teachers and parents.

That such a rich field for interesting research has received comparatively little attention in the past is a matter for profound regret. Especially is this the case when it is fully grasped that so many of the serious mental and physical disabilities, which are such severe handicaps in later life, can be traced to

causes originating in early childhood, which could have been avoided by intelligent treatment resulting from an intimate knowledge of the various phases of development in early life.

The difficulties associated with the investigation of the pre-school period are enormously increased by the absence—or comparative absence—of nursery schools, in which large numbers of children would be under careful observation as they are afterwards in the infant school. During this range of age in which habit formation is in such an active state of operation, and where wise guidance is of such infinite value for the future welfare of the child, there is a greater lack of expert assistance than at any other period of childhood.

Parents, teachers, and all students of young children, will be deeply interested in the chapters on Child Guidance Clinics and Nursery Schools. In the days to come, there will, undoubtedly, be an increasing amount of attention given to movements on scientific lines devoted to the amelioration of the lot of children suffering, to a considerable extent, from maladjustments as the result of mistakes made during the two to five stage of the child's life. Careful study and research in this direction will, it is hoped, not only relieve the child, but will point the way to the reduction, if not complete avoidance, of such maladjustments in the future.

C. W. KIMMINS

*General Editor of the
Home and School Library.*

THE PSYCHOLOGY OF THE PRE-SCHOOL CHILD

CHAPTER I

THE INSTINCTS OF THE CHILD

"THE human Will is the greatest power upon earth." With these words Preyer opens his chapter on "The Origin of the Will," in his well-known book, *The Mental Development of the Child*. In the chapter in question he finds the origin of Will in the movements of the child. He is right in doing so, for the Will is nothing more or less than the personality in action, and the earliest actions are the movements which he discusses. This side of the child's development has been too much neglected in the past. Only now is it beginning to take its proper place in child psychology.

Of course we must not fall into the error of regarding all the movements of the child as representing its Will in embryo. Some of

its movements are from the beginning as purely mechanical or automatic as any processes can be in a living organism. But, on the other hand, some movements are the real outward manifestations of the inner forces, which later become welded and organised into a character and a personality.

Movements of the child. To begin with, let us consider the various classes of movements we can observe in the child from birth. These movements fall into three great classes, so far as they come under the notice of the external observer. The first class consists of movements which apparently have no external cause, which seem therefore to be purely random movements, due we might suppose to an overflow of vital energy, now in one direction, now in another. Such movements have been called *impulsive*. Possibly, if we knew all the facts, we should find that some of these movements, at any rate, were evoked by stimulations from within the bodily organism of the child. In that case we should require to classify the movements in question in our second class.

This second class consists of the movements we call *reflex*. A reflex movement is a movement evoked by, and following immediately and inevitably upon, a stimulation from with-

out, or from some part of the body. To make clear to ourselves the precise nature of reflex movements it is necessary to remember that the child, like all the higher living organisms, is provided with a great system of interconnected living cells, the function of which is to enable it to adapt itself to surrounding conditions. This system we call the *psycho-organic system*. It consists of three parts. One part, called the "receptor" part, receives the stimulus from without. This part is represented in the various sense organs. A second part, called the "effector" part, makes the necessary response to the stimulus. This second part is represented by the muscles and the glands. The third part connects receptors and effectors. This is the nervous system, including all the different nerves, nerve trunks, and nerve centres—brain, cerebellum, spinal cord, and the rest. Now, a reflex movement may be defined as the immediate response of one or more effectors to a stimulus affecting a receptor. For example, light falling upon the eye causes certain muscles to produce a contraction of the pupil of the eye; the presence of food in the mouth causes the glands that secrete saliva to become active. These are typical reflexes.

The third class of movements or actions is the class we call *instinctive*. These movements

are, as a rule, more complex than reflexes. But this is not the most important distinction between the two classes. There are really three important differences. In the first place, reflex action is the response to a stimulus, whereas instinctive action is the response to an object or situation. In the second place, reflex action is inevitable and unvarying, instinctive action may be neither. In the third place, and most important of all, the mind is never more than a spectator in reflex action, whereas in instinctive action the mind is a participant in the game. We may be conscious that a reflex action has taken place after, or even during, the event. We may even be able to exercise a certain degree of inhibiting influence on the action. But in itself the reflex cannot be modified, and any inhibition is, as a rule, merely temporary. In the case of instinctive action, on the other hand, the whole process may be profoundly modified from the start, and this owing to the fact that the actions are taking place under the guidance of experience or consciousness.

In popular speech it is customary to oppose instinct and intelligence, as if the two represented different orders of mentality. We ought rather to look on them as complementary to one another. The idea that they are opposed

to one another has arisen because of the fact that we have sought to compare the phenomena of instinct at one level of the animal scale, as manifested among insects like ants and bees, with the phenomena of intelligence at another level, as shown in the behaviour of the higher animals and man.

This is not the way to get a clear understanding of the relation of the one to the other. We must study instinct and intelligence at the same level, if we are to get a clear idea of either, and of the relation between them. Low down in the scale of animal life all necessary actions are almost completely provided for in the structure of the organism from the start. The rôle left for intelligence to play in guiding action is, therefore, insignificant, and at this level we find no evidence for anything except the merest glimmerings of consciousness. Higher up the scale there is a much less complete provision in the structure of the organism at the start for the necessary forms of action, and this provision requires to be supplemented by the acquiring of special modes of behaviour under the guidance of intelligence.

The rôle left for intelligence to play is, accordingly, much more important, and we find evidence of this higher intelligence in what the animal at this level can learn to do. At the top of the animal scale there is a very incomplete

and fragmentary provision in the structure of the animal, at the start, for the activities which are necessary in its life. The part left for intelligence to play is very important, and we find, at this level, not only evidences of a high intelligence, but also a relatively long period of immaturity, during which the necessary activities may be acquired or learned¹ under its guidance. But from the bottom of the scale of life to the top we see unmistakable indications in an organism's behaviour of an impulsion or urge from within, driving the organism towards actions which are biologically essential. It is thus this inner urge that is characteristic of instinct at all levels. It is not a stereotyped series of actions, for which innate provision is made from the beginning, since this shows itself in the vaguest and most fragmentary manner at the higher levels.

One other point is worthy of notice before we go on to consider more specifically the case of the child. The directions taken by the impulsions from within, as shown in the behaviour of any organism, serve as a basis for a first rough classification of the various instincts we find in animals and man. There are three main directions. In the first place, we find impulsions towards actions that seem to have as their aim the preservation of the life of the

organism Under this head would be included instincts which have to do with the procuring of food, or with the avoidance of danger. In the second place, there are impulsions towards actions which tend to secure the continuance of the species Under this head would come the sex instincts and nest-building instincts of various grades and types In the third place, in the case of all gregarious animals—among which the human being must be included—there are impulsions towards actions that tend to secure the maintenance of the social group. All the so-called “herd” instincts would come under this head. If we think for a moment we see how great a range of human actions may be classed under one or other of these heads.

It must be admitted that in the human being, and in some of the higher animals, instinctive tendencies are too varied and too complex to admit of an adequate classification on this basis, adequate, that is to say, from a scientific point of view. But, in addition to serving as some sort of clue to guide us amid the complex tangle of instinctive impulses, this biological classification must lead us inevitably to the conclusion that instinct and intelligence are complementary aspects of the mental life. Not only is it the case that all so-called instinctive behaviour involves an

"intelligence factor," but it is also equally true that all so-called intelligent behaviour involves an instinctive driving force. In this instinctive driving force we must seek the origin of Will.

The child at birth has many reflexes in perfect working order, but of instinctive actions only the merest traces show themselves at first. Apart from the sucking instinct—if it is an instinct and not a reflex—it is difficult to point to a single part of the child's behaviour and say with certainty that it is instinctive. Impulses are there, however, from a very early period, which are beyond question instinctive, and these are the necessary conditions upon which depend, as the child grows, the acquiring first of all of control over his own efforts to gain some acquaintance with the strange surroundings in which he finds himself, and thereafter the securing of more and more mastery over these surroundings. What these instinctive impulses are we must now inquire, before going on to consider some of the phenomena in which they manifest themselves, and their development and organisation into a character, a will, and a personality.

The native impulses of the human being, when we look at them from a psychological, rather than a biological, point of view,

divide themselves into two great groups, which have been distinguished from the time of Plato onwards. On the one side we have impulses which arise out of feeling, and may be said to be directed towards feeling. Thus, every human being, on experiencing a pleasant sensation, has the impulse to act so that the pleasure may continue, and the impulse to seek the pleasure again after it has been withdrawn. In the same way there is a natural impulse to try to get away from what is experienced as disagreeable, and, as far as possible, to avoid conditions producing disagreeable experiences.

So also the experience we call being hungry involves an impulse to seek food in order that its peculiar disagreeableness may be removed, and being thirsty, in the same way, involves an impulse to seek something to drink. Such impulses may be called *appetitive*.

On the other hand we have impulses which are evoked by the perceiving of objects or situations, outside of us, and the impulse is an impulse to react in a certain way towards the object or situation. Thus, a threatening object or situation usually evokes the impulse to escape, in most cases accompanied by the characteristic emotion we call fear, though sometimes it may evoke the impulse to attack, with the emotion we call anger. Impulses of this kind may be termed *reactive*.

These two types of impulse may very well be taken to represent at the most primitive level what psycho-analysts have spoken of as the "Pleasure Principle" and the "Reality Principle" respectively, and much of their teaching regarding the relation of these two "Principles" to one another can be directly applied to the relation between the appetitive and the reactive impulses. One important difference between the two types of impulse, which becomes apparent when we look to the child's future, is that the appetitive impulses are practically incapable of development and organisation, at least, to anything like the same extent as the reactive. In fact, they frequently impede development and work against progress. The child in whom the desire for sensuous pleasure is over-emphasised is apt to become the self-indulgent adult. In the extreme case such a person may get entirely out of touch with the realities of social life to an extent calling for special medical treatment. Of course this is no argument for a too ascetic and Spartan bringing up of the child, the consequence of which might be equally serious.

Another interesting point in connection with the relation between the two is that the emotion which usually accompanies the evoking of a reactive impulse may come to be sought for itself, in which case we have the develop-

ment of an *acquired* appetitive impulse. One type of sentimentality in the adult has probably some such origin as this.

Important impulses of a reactive order, which show themselves early in the child's life, are the impulse towards adjustment of the sense-organs and of the whole body in attending to objects, the impulse towards grasping for objects coming into the field of vision, and, if the object is grasped and is of a suitable size, carrying it to the mouth, the impulse towards making sounds with the vocal organs, and the impulse towards locomotion. These impulses are so fundamental in the behaviour of the child, and are so soon overlaid by acquired reactions of the most characteristic and familiar kinds, that we are apt to forget altogether the instinctive impulses which underlie them. In particular, speaking, walking, and the like, are the outcome of such impulses, underlying and urging ever onwards the learning which is necessary.

Another important group of instinctive impulses is that of which play and imitation may be taken as typical. Children's play has long attracted the attention of the psychologist and the educator. It is very evident that it has an important influence on the development of the child. Of the various

theories of play that have been put forward, that which emphasises its biological function in preparing the young for the activities of adult life is deservedly popular. At the same time it must be remembered that this theory gives no real account of what play itself is. It does not in any way enable us to distinguish between playful and serious activity. Of course it has been said that play is the serious business of the child. To speak in this way, however, is to speak biologically, and not psychologically. It is quite true that in playing the child is carrying on in the best way possible, and in the natural way, the serious business of developing and educating himself. But nothing is more certain than that the child is entirely unconscious, as far as he himself is concerned, of this serious business. Also it is certain that he himself is quite aware of the difference in his own experience between playful and serious activity, though it may take a psychologist to formulate the difference in words.

The essential difference between the two is that in play the child is engrossed in the activity itself for its own sake, whereas in serious activity he is interested in the result which he is trying to produce. There is a further difference, which gradually emerges as the child becomes more and more clearly conscious of a real world of nature and men, and of

natural and social laws, to which he must adapt his activity. The result to be produced by serious activity comes to have reference always to this real world, whereas any result aimed at in play has reference to a detached world of his own. We shall return to this topic again later

Another instinctive impulse, which expresses itself in modes of activity very similar to those of play, is the impulse to experiment. The so-called constructive and destructive tendencies of the child are in the first instance merely manifestations of this impulse. Constructive activities in a strict sense arise out of the impulse to experiment when the activities are carried out in the service, as it were, of some other instinctive interest, as, for example, the instinct of self-display, which might be more appropriately designated the instinct of self-expression. Destructive activities, on the other hand, where they are not the expression of the aggressive instinct and anger, or the outcome of emotional conflict, remain more purely experimentation.

The imitative impulse differs from both play and experimentation in that it is essentially a social impulse. That is to say, it necessarily involves interaction between at least two individuals, whereas the activities of play and experimentation may be carried out by the child

entirely alone. Two levels of imitation must be distinguished. At the lower level the child quite unconsciously copies actions, gestures, tones and forms of speech, and the like. Such imitation might be said to be purely instinctive, rather than unconscious, since the child is undoubtedly conscious of what he imitates, though not of the intention to imitate. At the higher level the child *tries* to imitate, either because the action interests him, or the results to which it leads. This difference is worth noting because it makes a difference in the kind of people the child will imitate, and the kind of things the child will acquire by imitation. As far as the first type of imitation is concerned, the imitation will be quite indiscriminating, and those with whom the child is most frequently in contact will have the greatest influence. In the case of the second type, the child will tend to imitate older children and adults, as a general rule, and any action, gesture, or form of speech which interests him because of its novelty, or for any other reason.

An instinctive impulse closely allied to imitation, but which involves primarily the emotional life of the child rather than his external behaviour, is that to which the name "sympathy" has been given. All the simpler and more powerful human emotions—the instinctive emo-

tions—have more or less characteristic modes of expression in the attitude, the face, or the voice. Sympathy is the tendency to experience an emotion when we become aware of that emotion in another person by means of such characteristic modes of expression. Emotion is notoriously contagious. Through sympathy, then, the child experiences the emotions, and consequently acquires the emotional attitudes, of the people with whom he is in contact. This may have a far-reaching influence on the child's disposition and character, and on the happiness or unhappiness of his whole after-life. The child brought up with people who are full of fears of all kinds will develop these fears, sometimes with disastrous results, as we shall understand better after we have considered the emotion of fear. So also with anger. The child who is brought up in an atmosphere of constant irritation and displays of temper can hardly fail to become himself bad-tempered.

We now come to a very important group of impulses—those with which the chief human emotions are associated. This group comprises the impulse to escape from danger, the aggressive impulse, the impulse of curiosity, the acquisitive impulse, the impulse towards self-display, and that towards self-submission. The mere enumeration of these impulses is enough

to show their tremendous significance for character and will formation. They represent motive forces which are among the most powerful the human being knows, and the emotions with which they are associated are among the most intense he can experience. This association with emotions is one of the marks which differentiate this group of impulses from those we have just been considering. Another respect in which they differ is that they are evoked only in the presence of definite kinds of situation, and manifest themselves in specific and characteristic forms of behaviour towards these situations.

Let us begin by considering the escape instinct or impulse. This is the impulse with which the emotion of fear is associated. The kind of situation which evokes the impulse with the emotion is one which threatens danger or hurt. The question has been raised whether there are any situations which evoke fear without previous experience, and independently of any influence of sympathy. The question is not an easy one to answer. But experiments with very young children seem to show that there are at least two kinds of situation which have this effect. One is withdrawal of support, so that the child is in danger of falling. The other is a sudden loud noise.

The feeling of choking also appears to evoke the impulse and emotion, as well as the unfamiliar or strange. Apart from these, a child's fears are probably acquired, either from association with other people, children or adults, whose fears infect him, or from his own experience of pain and hurt. The behaviour in which the escape impulse manifests itself is, generally speaking, either flight or concealment. If neither flight nor concealment is possible, as in the very young child, the emotion of fear develops in full intensity, and the result is the fear type of crying or even screaming.

While the escape instinct is the most important of the protective instincts of the human being, and lies at the basis of much that is valuable in character, it must also be recognised that fear is the most crippling of all the emotions. Some individuals go through life beset with fears and anxieties to such an extent that everything they do is impeded, perverted, or rendered entirely abortive by the malign influence of their emotions. Such a condition is nearly always to be traced back to unwise treatment, or to accidental terrifying experiences inadequately dealt with in early childhood. The exploiting of children's fears in order to control them, though now happily rarer than it was at one time in educated

circles, is still more common than it ought to be. But this is by no means the only way in which mischief is done. The words and attitudes of older children and adults, with whom the child comes in contact, are the more usual sources of the fears which he develops. Thus, fear of the dark, fear of thunder, fear of ghosts, and the like are frequently derived from other children; fear of death, or disease, or drowning, on the other hand, come usually from nursemaids or parents.

If a child has developed a harmful or irrational fear in spite of precautions on the part of the parents, it is impossible to dispel it by telling the child not to be afraid, or even by giving reasons why he should not be afraid. This method of dealing with the fear may in fact make the situation worse than before by giving the child the impression that the fear which he cannot control is something to be ashamed of, so adding fear to fear, and producing a mental condition the seriousness of which can hardly be exaggerated. There is no general method of dispelling fear. Everything depends on the individual, the nature of the fear, the manner in which, and the extent to which, it has been established, and various other circumstances. But some general advice may be given as to the method of deal-

ing with a fear at the time when it is first displayed. The best antidote to fear at the time is laughter. Of course we must not laugh at the child, but rather get the child to laugh with us at the object evoking the fear. This method must be employed with discretion, only when the object is one which does not involve real danger, and only when we can be sure that the laughter we can evoke is genuine, so that the fear is not simply being driven underground, so to speak. The other method is to get the child to face the fear-producing situation, so that he may become familiarised with it, and learn from his own experience, both that it is not so terrible as he thought, and that he can face it like other people. Again it is necessary to exercise discretion in employing this method, and, above all, care must be taken to avoid putting too much strain on the child all at once. If the child tries to face a situation he fears and breaks down, then his condition is worse than it was before. Consequently it is well to proceed gradually, so that confidence may be slowly and surely acquired by the child.

Another important impulse showing itself quite early in the life of the child, and playing a considerable part in the formation of the character and the will, is the aggressive or

combative impulse, with the associated emotion of anger. This impulse varies enormously in its strength from individual to individual, from family to family, and from race to race. The behaviour in which it manifests itself may take the form either of direct physical violence towards persons or property, or of abuse, threats, insults, and the like, without actual violence. Anger may also find expression in indirect ways, by disobedience, by running away from home, and by every kind of perversity. This indirect expression is particularly characteristic of cases where its direct expression is repressed, as, for example, by fear.

The kind of situation that may elicit the aggressive impulse and anger in the case of the child is very general owing to the fact that they may be called into play when any impulse is opposed or thwarted. Hence, any situation that evokes any impulse whatever may evoke anger as a secondary reaction, and the stronger the initial impulse, or the stronger the interest that is obstructed or thwarted, the greater will be the tendency for anger to be evoked, and the more intense the anger. For the tactful handling of children these facts must always be borne in mind. To avoid the danger of anger being evoked, the child should be diverted rather than thwarted.

As a rule, paroxysms of crude anger are more characteristic of the earlier than of the later years of childhood. In the earlier years these outbursts take the form of kicking, biting, scratching, and the like. Later, the outbursts of this kind become rarer, and anger shows itself in more systematised behaviour, as in fighting with fists among boys. Later still, mere ill humour and sulking may become characteristic. At all stages, however, there may be a reversion to the crude anger of childhood.

Since the aggressive impulse is one of the most important elements in the strong, self-reliant character, it is obvious that we must not seek to eliminate it, if that were possible, from the nature of the child. Rather must it be directed into suitable channels and brought under control. On the other hand, the over-stimulation of the impulse to the point of emotional outbursts of anger must be avoided. Anger in the child ought never to be regarded as a source of amusement to the grown-up. From an early stage the aggressive impulse may be directed to the overcoming of obstacles, to the great gain of the child, in place of wasting itself in emotional outbursts, to his hurt and loss. We shall have occasion to return to this point later when we come to

consider the "bi-polarity" of the instinctive emotions.

A second source of energy, and one that is of even greater significance for character and personality, is the impulse towards self-display, or perhaps it might be better to say self-affirmation. The psychology of this impulse is exceedingly complex and difficult, but the impulse is of such fundamental importance that the difficulties must not be allowed to interfere with a clear understanding of the psychological situation and the issues involved. The impulse towards self-display is exhibited in a very obvious and definite manner by several of the lower animals. They behave as if their object was simply to draw the attention of other animals of the same species to them, to make other animals take notice of them.

The same impulse shows itself in the child at a fairly early stage—the end of the third year, Ribot says,¹ but he appears to be speaking rather of a developed form than of the primitive instinctive impulse. When the idea of the Self develops,² the impulse at once takes the position as the central core of the Will, which it ever afterwards retains. With the coming on the scene of

¹ *Psychology of the Emotions* Chapter V

² See Chapter on "The Development of Perception "

the idea of the Self the impulse also seems to change its character. Previous to this it is, as we have said, an impulse merely to draw attention, and secure recognition. Simple recognition by others seems to represent its satisfaction. It now appears, however, as an impulse to seek admiration in addition to mere recognition, as an impulse, that is to say, towards self-display in a strict sense.

At the same time, another impulse of an opposite kind also begins to show itself, an impulse towards self-effacement or self-abasement or submission. Most writers have assumed that these two self-impulses, which we may for the sake of brevity designate the positive and negative self-impulses respectively, are both present from the beginning as co-ordinate instinctive impulses. This may well be doubted. We have really no evidence whatever that would go to support such a view, and the relation between the two opposite impulses, especially as regards the associated feelings and emotions, would tell strongly against it. The emotion associated with the negative self-impulse is that which would be evoked by a check to the positive. It is much safer, therefore, to assume that the primitive impulse is the impulse to seek recognition, and nothing more, and that

when the idea of Self arises, but not till then, the negative impulse towards self-effacement makes its appearance. The impulse towards securing recognition always remains in most people the stronger, and exhibits all the marks of a fundamental primitive impulse.

The relationship of the two Self impulses to one another may serve to introduce us to an important characteristic of all this group of instinctive impulses we are considering. As we have seen, they are associated with fundamental human emotions. But this is not the whole fact. The associated emotional excitement is in each case bi-polar. Or, to put the matter more simply, each of the impulses has associated with it *two* emotions of opposite kinds—what we are calling “polarities.” So far as the impulse towards self-display meets with the satisfaction it seeks—the admiring regards of other people—the emotion experienced is that which has been called “elation.” If, however, the impulse is thwarted by meeting with the ridicule, or even the indifference, of other people, the emotion experienced will be of an opposite kind or polarity. We have no precise designation for this particular emotion, but “feeling small” very nearly describes it, and perhaps “humiliation” might be employed

to designate its extreme forms. In any case it is plain that either of two opposite poles of emotion may be experienced in association with the impulse towards self-display, according as the impulse is satisfied or thwarted.

This bi-polarity is a universal characteristic of the whole life of feeling. It shows itself also, as we have just indicated, in association with the other instinctive impulses belonging to the same group as self-display. The child's joys and sorrows, in fact, are the experiences it gets according as its instinctive impulses are gratified or thwarted. Hence, joy and sorrow may be taken as representing the bi-polarity of feeling in connection with instinctive impulses in the same way as pleasure and "pain"¹ represent this bi-polarity on the simple sense level. Moreover, these polarities, when the emotional excitement reaches a high degree of intensity, find expression in laughter and weeping respectively, laughter being the natural expression of joy, as weeping is of sorrow. Theorists

¹ The word "pain" is employed in ordinary speech as the opposite of pleasure, and that is how it is employed here. As a matter of fact "pain" also designates a sensation, and we have really no word in the language which expresses the opposite of pleasure as a feeling. It has been suggested that "unpleasure" should be used. We have the opposition in "pleasant" and "unpleasant."

have long quarrelled about the meaning and explanation of laughter. They should study the natural laughter of the young child, not the sophisticated and distorted laughter of the adult. The view we have expressed was of course Darwin's view,¹ and it is the only sound foundation for psychological theories of laughter.

In the development of the child, laughter does not apparently show itself till the fourth month or so. The smile, however, which is the *avant-courier* of the laugh, makes its appearance much earlier. It is as if the child experienced sense pleasure, and learned to smile, much sooner than it was capable of joy. Weeping, on the other hand, may be the expression in the child either of bodily pain or of sorrow. Hence, it is manifested earlier than laughter. At the same time it is interesting to note that sobbing, as distinct from tearful crying, makes its first appearance about the same time as laughter.

We may say, then, that the child's joys and sorrows, as well as his laughter and tears, have their psychological basis in the important group of instinctive impulses we have been considering. In discussing these impulses we have been discussing the foundation of the child's whole emotional life, therefore, as

¹ *The Expression of the Emotions*, p. 198

well as important constituents of his personality and Will.

It is now necessary to pass on to the consideration of some of the chief phenomena in the development of this emotional life. One of the fundamental laws regulating the behaviour of every living creature is that which has been called the "law of selection." This law is simply an expression of the fact that any action which leads to disagreeable results will tend to be discontinued, whereas an action that leads to agreeable results will tend to be continued, repeated, and confirmed. There is thus a selection of forms of behaviour by the results experienced, according as these are agreeable or disagreeable. "The burnt child dreads the fire," we say, meaning that if a child suffers pain as a result of a certain action, he is not likely to repeat the action. The saying means something more than this, however, and the phenomena are not nearly so simple as we are apt to suppose. Where a mere random movement of the child is in question the phenomena may be relatively simple. That movement results, let us say, in a disagreeable experience, sufficiently, but not too severe. There will be set up a tendency to avoid the repetition of that movement in future. Many of the child's movements, however, are not random movements, but movements

prompted by an instinctive impulse. What of the phenomena, then?

In order to understand what happens under these circumstances, we must take into consideration other laws, particularly that which may be called the "law of transference." Expressed simply, this law states that, if a feeling or emotion is experienced in connection with a certain object or situation, there will be a tendency for the emotion to return whenever that object or situation presents itself again, and the corresponding instinctive impulse will, as it were, attach itself to that object or situation. Not only so, but the thought of that object or situation will tend to evoke the emotion. In the latter case we have what is called a "sentiment" established, centring round the idea in question. Suppose, for example, that a child has a terrifying experience in connection with a certain place or person. As a result the idea of that place or person will reawaken fear in the mind of the child. A fear sentiment has been established. The typical sentiments are love and hate. This simple fear sentiment will readily become a hate sentiment, if anger, as well as fear, is associated with the idea of the place or person, which, as one may easily see, is very likely to happen. In the adult sentiments may reach a very high degree of complexity.

In the child they are usually relatively simple. But it must be remembered that, simple or complex, love or hate, a sentiment is a more or less permanent modification of the mental make-up of the child.

William James has formulated another law, which he calls the "law of inhibition by habit." He states the law thus: "When objects of a certain class elicit from an animal a certain sort of reaction, it often happens that the animal becomes partial to the first specimen of the class on which it has reacted, and will not afterwards react on any other specimen."¹ What James had in mind was the selection by an animal of a particular hole to live in, a particular mate, and so on. It is evident, however, that the law is badly named, and also badly formulated. The law ought to have been called the "law of sentiment formation," and ought to have taken the form: When an emotional experience is associated with an object, the idea of that object tends to become emotionally coloured, and this may have the effect of rendering the individual either indifferent, or liable to emotional excitement, according to circumstances, in the presence of similar objects. The formation of sentiments in all cases gives a permanent bias, as it were, to a person's emotional life.

¹ *Principles*, Vol. II, p. 394.

A further law may be called the "law of development by stimulation." This law has already been illustrated in our consideration of the emotions of fear and anger. The more frequently an emotion is evoked the more easily can it be evoked. The more frequently a child experiences fear the more timid he becomes; the more frequently he gives way to anger the more likely is he to give way to anger again. This is, in fact, the most common origin of such undesirable traits of character.

We can now go back to the case of the child acting under the influence of some instinctive impulse, and meeting as a result with a painful experience. The pain will not abolish the impulse. The same situation presents itself again, the child acts as before, and again has the painful experience. This may occur several times. But situations involving painful experiences come to be feared. Accordingly we shall have two instinctive impulses now evoked by the situation, prompting to two inconsistent kinds of behaviour. These are the conditions under which what is called a "complex" is developed. A complex may be regarded as a variety of the sentiment where the emotion or emotions involved are disagreeable because of the fact that antagonistic impulses are evoked. The action may now be

inhibited, but that does not by any means end matters. The mutually incompatible urges are experienced whenever the situation presents itself, even in thought. The immediate experience is intensely painful emotion, which may lead to the thrusting of the thought out of the mind—what is called “repression”—and all kinds of indirect results may follow later, into which it is impossible to go at present.

It must be noted that the painful experience need not involve physical pain. The disagreeableness of baffled and disappointed impulses and desires may exert an influence more serious and far-reaching than mere physical pain. At the same time, it would be a mistake to ignore the effects of physical pain in this connection. The saying, “Spare the rod and spoil the child,” has still considerable vogue. To expect to get a child ultimately to take pleasure in doing something by the infliction of physical pain is patently absurd. To expect to get him to refrain from doing something by the same means is not quite so absurd on the face of it. If the impulse to do that thing still remains as strong as ever in spite of the physical pain we do not seem to be any farther forward. If that impulse is one which is of definite value when rightly directed the

infliction of physical pain has done definite harm. The association of painful experience with anything whatever tends to establish, as we have seen, a fear sentiment in the first instance, which itself means a weak point in the character. Moreover, the fear sentiment, as we have also seen, may readily become a hate sentiment, or may develop a resentment, or produce a complex, the effects of which may influence adversely in many direct and indirect ways the whole future life of the individual.

Allowing instinctive impulses to operate unchecked is not the only alternative. We can divert the impulses into legitimate channels, utilising, as far as possible, the phenomena of transference. This must always be the aim in the first instance. Any kind of punishment is a last resource. Its effect in any case is merely negative and inhibitory, and even under the most favourable conditions we cannot look for constructive results from its employment.

The complex which is most frequently met with is that known as the "inferiority complex." This is established when the child's positive self-impulse, the impulse to seek recognition, to seek to be regarded as of some importance, meets with constant and painful checks and disappointments. In the first instance a painful

feeling of inferiority in some respect or in all, is experienced. If this persists, and is not relieved by success or encouragement, the complex comes into existence. The results of its establishment vary with the individual, with the conditions determining its establishment, and with the intensity of the emotions and the strength of the impulses involved. These results are nearly always to be regarded as serious. There may be a paralysing lack of self-confidence in the child, even in the less serious cases, or a spirit of resentment and hostility directed against things in general. In the more serious cases the outcome is usually grave delinquency or mental abnormality. The reaction of some children is in the direction of finding some compensation for inferiority in one respect by developing some special capacity, and so attaining superiority in another respect. Occasionally, therefore, the final outcome may be a distinct gain to society at large, though seldom even in this case without much suffering to the individual. Too often, however, compensation is sought in the world of phantasy, rather than in the world of reality.

The Will is the personality in action. The forces organised in the personality are the instinctive impulses we have been discussing. Strength of Will is dependent on the strength

of these, and on the stability of their organisation. The organisation takes place through the formation of the Self sentiment. These are the fundamental facts which must be kept in mind when we seek to guide and direct the emotional development of the child.

CHAPTER II

THE DEVELOPMENT OF PERCEPTION

WE have found the earliest expression of the Will of the child in his earliest movements. But these movements are responses to definite situations which the child meets. How does it come about that the child responds to situations at all? Here we are confronted with the central mystery of mind and consciousness. The very purpose of consciousness appears to be to enable the human being—or the animal for that matter—to adapt his movements and behaviour to the situations with which he is faced in the world around him. The first step in adapting one's behaviour to a situation is becoming aware of the situation—*perceiving* it. The child, therefore, adapts his behaviour to situations because he perceives them. In perception we are dealing with the origin of human Reason, as, in the case of the instinctive impulses, we are dealing with the origin of human Will.

In the previous chapter we saw that the receptor part of the psycho-organic system, represented in the various sense organs, had as its function the receiving of stimuli, ordinarily from without. The stimuli become sensations, and the perceiving of situations is based on these sensations. Sensations are classified for us by the different sense organs through which they are derived. To the five senses of touch, taste, smell, hearing, and sight, which popular speech recognises, we must add temperature, pain, movement, and organic sensibility—that is, the miscellaneous group of sensations arising in and from the various visceral organs. These, then, represent the basis of the child's perception. From birth all the child's sense organs seem to be actively functioning, except the ear, which cannot function until the fluid, which fills the cavity of the middle ear at birth, is replaced with air. But, although all the other sense organs are functioning, the number of discriminated sensations in the child's early experience must be relatively few. We can only judge, of course, what sensory experience the child has by watching his responses. These show unmistakably the relative narrowness and poverty of his sensory world, that is, the relative fewness of the situations he is perceiving. James has made current the notion that the child's early

experience is of the nature of "a big, blooming, buzzing confusion." This is probably a quite erroneous and misleading description of the actual state of matters. It is much more likely that the earliest experience is of a quality standing out against a vague, undiscriminated, and, if we may so describe it, quiescent background. Possibly there is some alternation between the two conditions—the formless confusion, and the definite quality with its background. But it is certain that the formless character of experience, even if it exists in this way in the beginning, very soon almost wholly disappears, except in unusual, and to the child disagreeable, situations.

To the question, When does the child begin to perceive objects? the answer must, therefore, be, that the child probably perceives objects from the very start, but the objects he perceives are not at first the complex, clearly discriminated objects which the adult perceives, but merely a something, having an interest, and thus a meaning, of its own, standing out upon an undiscriminated background. Nothing could be more inconsistent with the facts of the mental life, either of the child or of the adult, than to suppose that this arises out of a confused mass of initially undiscriminated sensations, pouring into the mind through the

avenues of sense. From the beginning the human mind—and the animal mind no less—shares in the shaping of the world that is experienced, because it is the nature of mind to do so. That is how the mind works, wherever and whenever it manifests itself. The mind does not at any time simply receive impressions passively; it actively and progressively takes and shapes its world of experience from the outset. The native impulses and interests of the child, which we have already discussed, determine the actual shapes which shall be imposed on the world at the start. This may be said to be the first direction their activity takes. But the main fact to remember is, that the sense world of the child is the product of activities from within, as well as of stimuli from without, that a mind, to put it more abstractly, cannot help shaping its world of experience, because that is the nature of mind.

The first important step forward towards an intelligent and rational view of the world in which he finds himself is taken by the child when he distinguishes between himself and what is not himself. This step he begins to take when he first finds the need for what Stout has called "motor adaptation" in connection with the world of sense. The point at which, and the manner in which, this need

arises can easily be understood. Some of the child's experiences are entirely within his control, as, for example, the experiences he gets from the free and unimpeded movement of his limbs. If all his experiences were of this kind he would be omnipotent in his own little world, and would never become aware of a greater external world at all. Other experiences, however, are of such a kind that they are partly within and partly beyond his control. In connection with these the need for motor adaptation is felt. Obstacles may prevent the free movement of his limbs in certain directions, and movement is only possible by adjusting its direction to these obstacles. He may be interested in watching the flight of a bird, and can only continue to gratify the interest by turning his eyes and head so as to maintain the bird in the field of vision. Experiences of this kind, partly controlled by the child, and partly controlled for him by real conditions independent of him, to which he must adjust himself, cause the distinction between the Self and the Not-Self to emerge in his experience. To begin with, the dividing line between the two is the surface of his own body. The parts of the body are themselves distinguished from external objects by the fact that when he grasps a part of his own body he has two separate sensory experiences, one in the grasping

hand and one in the part grasped, whereas in grasping an external object he has no experience of the second kind. This, combined with the control he finds he can exercise over the movements of parts of the body, and the intimacy of the pains which come from the body, causes him, as we have said, to draw the dividing line between the Self and the World at the surface of the body.

Important though this step is, we must not think that the child passes at once to the adult notion of a real world, with its own conditions and laws, existing in entire independence of himself and his will, and imposing itself upon his will as a limitation upon what he can do and what he cannot do, upon how he can act and how he cannot act. The world of the adult develops only gradually. In the child's world, even after he has become sensible of an independently existing real, unreality or illusion is for a long time supreme, and until the child begins school no sharp line of demarcation is drawn between the two. The period of omnipotence passes into the period of magic, and that, in turn, gives place very slowly to the period of the recognition of causal law. In consequence of this—and this is a fact that must never be forgotten in dealing with young children—the child perceives things differently from the adult. As many writers

have pointed out, he resembles primitive man to an extraordinary extent in the way in which he regards the world. The distinction between living and not-living, for example, in the objects around him, as Koffka and others have pointed out, is very inadequately drawn even when the child begins school. Thus, Sully tells of a little girl of five who said to her mother: "Ma, I do think this hoop must be alive, it is so sensible; it goes where I want it to."

There is at times even something of the nature of acute mental conflict, when the child's world clashes with that of the adult at some point which is of very real significance, as far as the child's attitude to his world is concerned. At all events, the process of growth into the adult's world is not always unmixed pleasure to the child.

"Shades of the prison house begin to close
Upon the growing boy."

Even at comparatively late stages there may be reversions to the earlier and more childish point of view. To this phenomenon we shall return later when we consider the subject of day-dreaming in a succeeding chapter. The facts being as they are, it is certain that an unsympathetic treatment of the child's world

by the adult, with a view to bringing the child to a too early realisation of the facts of the world and of life, is not unlikely to do harm, and the more harm the more sensitive the child. In particular, parents are apt to worry themselves and their children unduly regarding deviations from what to the adult appears the strict truth, which are really not deviations from the truth of the child's world at all.

This, however, is somewhat of a digression. The important psychological fact that must be kept in mind at this point is that, although the world of reality is first apprehended by the child as limitations and conditions imposed on his activity and on the gratification of his desires, the world as he perceives it—whether as child or adult—is never wholly dependent upon external factors. As we have already indicated, it is an entirely erroneous idea to suppose that the world as we perceive it is due simply and solely to the impressions made upon our sense organs by the objects in the environment which affect them. The adult, as well as the child, partly creates the world which he perceives. On the one hand, objects are selected to be attended to because of their interest for the individual, while other objects, which are equally in a position to affect the sense organs, may be wholly ignored, and not

perceived at all. Even those objects which are attended to and perceived are perceived in accordance with the individual's interest at the moment, their various meanings and aspects being emphasised or suppressed accordingly. On the other hand, the individual's knowledge and previous experience have prepared him to interpret things in special ways, and interpretation is the final and essential phase in all perception. Psychologists, accordingly, speak of subjective and objective factors in perception, the subjective factors being those influences in the experience which come from within the individual himself, the objective those dependent on the actual stimulation of the sense organs by external objects. In many cases—and not only with the child—the subjective contribution forms a more important, characteristic, and essential part of the perceptual experience than the objective.

The objective factors are, of course, the data of sense. Without these objective factors there could be no perception of external objects at all, and however important the subjective contribution to perceptual experience may be, the objective factors must, nevertheless, be regarded as fundamentally necessary to make the experience perceptual at all. Consequently it is to be regarded as a matter of very deep concern that the child's sense organs should

function efficiently. Vision and hearing are the senses of greatest significance. Defects in these vary from slight subnormality to almost complete, or complete, deprivation of sight or hearing, or both. Our sympathy always goes out freely to the blind child, but it is seldom realised that the deaf child is under a handicap even greater than that of the blind child with respect to mental development and education. The great handicap in the case of the deaf child lies in the fact that we are unable to get into touch with it, or it with us, and the consequent impoverishment and distortion of that social intercourse which plays so great a part in the development of the normal child. Even when a considerable amount of hearing is present the partially deaf child is still gravely handicapped. The appearance of speech is greatly retarded, and such speech as develops tends to be very imperfect and indistinct. As a result the deaf or partially deaf child is frequently set down and treated as a mentally defective.

Defects of vision, short of actual blindness, are very common, and are of various types. There may be short-sightedness or myopia, long-sightedness or hypometropia, irregular vision or astigmatism, colour blindness or colour anomaly, and all in various degrees. It is very important that these defects should

be discovered as soon as possible, and as far as possible corrected. Colour defects and anomalies cannot be corrected. Other visual defects usually can. Sometimes the actual impairment of vision may be relatively slight, so that it remains for a long time unsuspected. The eye-strain, however, which such slight impairment involves, may cause nervous or digestive troubles, with general impairment of physical and mental health. These effects in turn may direct attention to the presence of the eye-strain, and whenever that is discovered, the defect producing it should be at once remedied. Someone has recorded a case of a child who, though otherwise intelligent and eager to learn, was found to have great difficulty in learning to read at school. Examination showed that she suffered from diplopia (double vision), so that she saw two words in place of one. She herself said that when she was at the very beginning of her school career she used to be scolded for carelessness when she read or wrote every word twice, so that she had learned not to say or write two words, even when she saw them. Of course such a condition should have been discovered and remedied before she went to school at all, to the great benefit of the child, both with respect to her happiness and with respect to her educational progress. The sooner all

such defects are discovered and rectified the better.

The mere fact that a child is subjected to sense stimuli, and that his sense organs are functioning efficiently, must not mislead us into thinking that the child is actually getting the experiences which we should get in a similar situation, or which we may desire that he should get. This is where the subjective factors come in. Unless the child has some interest in perceiving objects, it is quite certain that he will not perceive them, however efficient his sense organs may be. Many old fallacies in education have their root here. Sense-training, training in observation, and the like, have often been regarded by teachers and parents as desirable ends to seek in the education of young children, and they have proceeded, as they thought, to give a training in sense perception, without any regard to the interests of the child. The results could hardly fail to be disappointing. It was not that the ends sought were not attainable, but that they were not attainable by the purely formal methods which were generally employed.

Let us take sense-training first. How far a physiological development of the sense organs and the nervous centres can be brought about through training in the use of the senses it is impossible to say. It is certain that this is

not what sense-training means and involves in the general case. What happens rather is that the individual with extended experience learns to discriminate what at first was undiscriminated. After the first few months, in which the child's sense organs are reaching maturity in physiological development, this increase of discriminating ability can be fully explained without assuming any special development of the sense organs through training. The effect of attention in any sense field is cumulative, so that the more frequently one has to deal with objects of the same kind the more do differences become obvious which were at first unnoticed. It is largely a matter of knowing what to look for. Or, to put it in another way, slight differences are unnoticed until they have a meaning for us, and then they hit us in the face, as it were.

Thus, the child playing with Montessori material becomes discriminating in colours, not because the colour sense has been developed physiologically, but because there has been a psychological development, resting mainly on interest in, and familiarity with, colour differences. The value, therefore, of all so-called sense training before or during school life will depend on the value of the interests developed, and of the material in connection with which the child becomes discriminating,

and not on any hypothetical—*very* hypothetical—physiological development of the organs of sense.

A similar story has to be told regarding observation. We observe that in which we are interested; objects that have no interest for us are unnoticed. The child is not in any way different in this respect. If we wish to develop observation in the child, the natural and certain way of doing it is to get the child interested in the things we wish it to observe. Of course it is possible to develop observation for the mere sake of observation. The child might be got to notice all kinds of objects, as a sort of game, the interest being the entirely extraneous one of noticing as many objects as possible. But that kind of observation does not seem to be of much value. If a parent wishes to make a child observant of things that are really worth observing, then the way to do this is to get the child interested in those things. The observant child is the child who is interested in things.

Several studies have been made with the object of determining the nature and range of the young child's perceptual world. The general results have often been summarised, perhaps most satisfactorily by Stanley Hall.¹ Great differences are shown between country

¹ *Aspects of Child Life and Education.*

and city children, which clearly indicate the desirability of taking city children frequently into the country, and country children frequently into the city. In general the perceptual experience of the child at the time of his beginning school is very defective, inaccurate, and uncertain, full of gaps filled with fantastic imaginings. There is, in fact, as Hall has pointed out, practically nothing of educational value, "the knowledge of which it is safe to assume at the outset of school life."

Some of the children's ideas of natural phenomena, recorded by Hall, are illuminating from the point of view of the way in which children's minds work in their perceptual world. Thus, "God lights the stars so that He can see to go on the side-walk, or into church." "When people die they are slung up into the sky, where God catches them." "Thunder is perceived as God groaning, or kicking, or rolling barrels, or turning a big handle, or grinding snow, or talking aloud." "Lightning is God striking many matches at once." "He keeps rain in heaven in a big tub." "God lights the stars with matches, or blows them out."¹

We are not at present concerned with the child's modes of thought, as revealed in these illustrations. What we are interested in just

¹ See Colvin, *The Learning Process*, p. 85.

now is the influence this kind of mental background necessarily exerts on his perceptual experience. In the light of these facts we can understand something of the world in which the child lives, and the manner in which he perceives the various objects and events in that world. This is truly the stuff of which dreams are made, and this child world joins on easily to the world of the fairy tale. We might say, indeed, that this gives us the key to the manner in which the fairy tale itself is apprehended by the young child.

There is one other point which requires to be considered in the present chapter. We have seen how the child gets his first notion of a real independent world. We have also seen that in the child's perceptual world the distinction between the living and the not-living only gradually develops. The question naturally suggests itself: How does this distinction arise and develop at all? And there is a further question: What is the significance of this distinction in the development of the child? To these questions we must now address ourselves.

Of the various objects in the child's external world some are of more than usual interest to the child, (1) because they move about, and so continually attract his attention, (2) because they are intimately connected with his satis-

factions and pleasures, and with the removal of his discomforts and pains, (3) because they react differently towards him, showing, in particular, an understanding of his wants and desires, and either co-operating with, or offering active resistance to, his efforts. Objects in his external world will, therefore, fall for him into two classes—persons and things—based on these differences. The definite distinction between the living and the not-living develops only gradually, as we have seen, from this initial distinction, but it is a thought distinction, whereas the distinction between persons and things is a perceptual distinction.

The significance of the emergence of the distinction between persons and things in the child's environment can hardly be exaggerated. With it the child realises that here are other "Selves" like the Self he has separated off from the Not-Self, and that he is a person like these other persons. That is to say, the idea of a "social self" is born, and the social development of the child is initiated. "Self" and "others" are thenceforward perceived and interpreted in terms of one another. He understands the acts and expressions of others in terms of his own experience, and he sees himself reflected in the words and acts of other people. The latter point ought to be specially emphasised. The only way the child

can get an idea of himself as a person is by accepting the idea of himself which others have formed. If others show by their words and acts that they think he is a clever child, then to himself he becomes a clever child. If they show that in their eyes he is a naughty child, then likewise to himself he becomes a naughty child, and not infrequently he plays the part to perfection, simply because he has accepted this opinion of himself from others. If, again, he gathers from the words and acts of others that he is of no account, then to himself he becomes of no account, and a feeling of inferiority developed in this way may become an inferiority complex, with the most disastrous results later. There is, indeed, no aspect of the process by which the child comes to know and interpret his perceptual world more significant than this for the future development of his character and whole personality.

CHAPTER III

THE THINKING OF THE CHILD

THE question is sometimes asked. When does the child begin to think? The answer depends on what we mean by "thinking." The word is generally used as a wide term to cover mental process in general. When we ask a companion who has for some time been silent and absorbed in something, if we may judge from the dreamy look in his eyes, what he is thinking about, we are using the word in this sense. We assume that certain mental processes are going on—thinking—and we wish to know the object or objects with which these processes are concerned.

Whenever ideas are passing through the mind we have thinking in this wide sense. When we speak of "thinking" in a narrow sense, on the other hand, we refer to mental processes directed towards the solution of some problem, and generally to mental processes at a high level—what is called *conceptual thinking*. To that we shall come presently.

In the meantime the word had better be employed in the wider sense. In this sense, to answer the question with which we began, the child begins to think with birth.

At this point it is necessary to distinguish the different levels at which thinking may take place, the different levels, that is to say, of mental life. These are three. The lowest level is the perceptual level, where thinking is wholly confined to the objects affecting the sense organs at the moment, and from moment to moment. The mental life in this case is bound down to the immediate present, the here and the now. At the second level, thinking may take place by the revival in the form of what the psychologist calls "images" of what has been previously experienced in perception. The mental life is thus no longer bound down to the here and now, but may range more widely with the reviving of past experiences and the combining of them in entirely new ways, as in memory and imagination. This is the ideational level, or the level of what is called "ideal representation." At the third level, thinking is characterised by an insight into the relations of things, and by the ability to grasp aspects and qualities of things, and to hold them in the mind independently of the concrete things and situations in which they occur at the moment.

This relational thinking is the basis of all abstraction, comparison, generalisation and reasoning. This level we may speak of as the conceptual or rational level of the mental life. It is highly developed in, and characteristic of, the human being, but shows itself only in a very rudimentary way in the lower animals, and not at all except in the most intelligent of them, as the monkeys and the apes.

It has sometimes been said that the child's mental life gradually rises through the lower levels to the third level, by a process that can be observed and noted, that there is a stage when the child's mental life is not above the purely perceptual level, followed by a stage of imagination, and that in turn by a stage of comparison, judgment, and reasoning. One cannot say that this view is entirely wrong, but it may become very misleading. It is true that the earlier months, and even years, of a child's life are largely occupied with the gathering of experiences of the world in which he lives, through purely perceptual processes. But there is no period of his life, except perhaps the first few weeks after birth, when we could rightly describe his mental life as entirely perceptual. If not at the very beginning, then very soon in his mundane career he finds himself able to think of things when they are not

present to his senses—the second level—and when he begins to use language this is itself evidence that the third level is well developed. Hence, from almost the very beginning of the child's life we have to deal with a distinctly human type of intelligence, and with thinking at levels barely reached even by the highest of the lower animals.

Not only must we distinguish different levels of thinking; we must also distinguish different kinds. On the one hand there is directed thinking of the kind we might call logical, which aims at solving real difficulties or meeting actual situations. Opposed to this there is the kind of thinking that has been called "autistic," where the aim is merely to secure pleasure or to avoid pain, and the process consists in dwelling upon pleasing ideas and thrusting disagreeable ideas out of the mind, without any regard to the actual conditions of the real world. This second kind of thinking is best exemplified in what we call day-dreaming or phantasy.

When discussing the development of the distinction between the Self and the Not-Self, and of the first notion of an independent reality, we saw that the earliest phase of the child's mental life might be spoken of as the period of omnipotence. His wishes are gratified apparently because of the mere fact that

he wishes. To wish is to have. The feeling of reality arises from the felt need of adapting his actions to conditions existing outside and independently of himself. It is at this point that reality thinking and autistic thinking begin to diverge from one another. Reality imposes limitations upon the gratification of the child's desires. Some effort and concentration may be required. Or the conditions upon which gratification depends may not be present at all. The child, nevertheless, has resources within himself, by which he can in many cases secure gratification without taking account of reality. He can by his imagination create a world in which he finds the gratification he seeks. Thus day-dreaming, phantasy, or autistic thinking begins. The extent to which it develops varies with individuals. Some children live in a world of illusion, and dream practically all the time. A certain measure of phantasy is, in fact, a universal characteristic of the human being. Fairy tales, mythology, all kinds of works of fiction are the outcome. And the enjoyment, no less than the creation of these, depends upon, and involves, the same mental phenomena.

There are three more or less typical kinds of autistic thinking. First of all there is day-dreaming in its simplest and most usual form.

Few people find themselves in an ideal environment and under ideal conditions which afford satisfaction to all their wishes and cravings. They, therefore, in their day-dreams construct such an environment, and create such conditions, for themselves. This is the general principle underlying all day-dreaming. The only child, with no companions to play with, creates imaginary playmates. The day-dream thus compensates for the deficiencies of the real environment, and since different kinds of deficiency will be felt by different types of child, and at different periods of life, so different types of day-dreams will occur characteristic of the individuals and of the stage of development.

Here is a very interesting case of autistic thinking, recorded by G. H. Green:

F. S., a boy, has been from his earliest days greatly interested in railway trains. Till lately he has been interested in no other toys. He has asked for pictures of trains and has made endeavours to draw them. He asks adults to draw trains for him, and cries if the train is not satisfactory. When taken out for walks he invariably asks that he shall be taken somewhere near the railway.

He was once taken to Fratton Station. He would have remained on the platform for ever,

watching trains coming and going. He has learned the names of a number of colours, as a result of the attempt to distinguish between different engines, and the lights and colours of signals. He has also acquired an unusually good vocabulary as a consequence of the endeavour to understand the answers given to the many questions he asks.

He has no brother, and but one sister, much older than himself, and with little time or patience to play games with him. His father is a busy man, and his mother's time is rather fully occupied. As a result he is often lonely.

Soon after he was three years of age it was noticed that frequently he would leave his play with his toy trains and begin to walk in a peculiar manner in a small circle. At the same time he usually inserted a finger in his mouth, and muttered nonsense syllables, often with pronounced rhythm.

Soon after this he began to speak of a child called "Mary." Mary was a very vague and indefinite being, since at times he spoke of her as taller than his mother, and at other times as shorter than himself. The larger Mary was a person whom he asked to do things that he was unable to do for himself; the smaller a girl who played with him, and who was generally under his orders.

Within a few weeks the phantasy grew very definite. Mary was a girl, smaller than himself, who lived with her mother in a shop near Racken (Fratton?) Station. The walking to which reference has already been made was now spoken of as playing with Mary, and the muttering as talking to Mary.

He has lately frequently asked for things that his parents have had to refuse him: expensive toys or books. His retort has been on such occasions: "Never mind. There's one in Mary's mother's shop."

He has compared Mary's mother with his own, to the disadvantage, as a rule, of the latter. Seeing his mother preparing food, he has asked,

"What are you making?"

"A pudding," his mother has said.

"What is there in it?"

"Red currants."

"Mary's mother," he said very slowly and impressively, "made a very large pudding the other day."

"Larger than this?" asked his mother.

"Much larger," said he, and added, "There were *plums* in Mary's mother's pudding."

In the garden a similar scene occurred. His mother had been picking raspberries and filling a basin with them. F. S. was in the garden with her. After a while he said,

"Mary's mother gets her raspberries in a bucket."

"Does she?" asked his mother; and held out two or three raspberries to him. He took them. Before he ate them he said, "Mary's mother always gives Mary the bucket."¹

The great majority of day-dreams, whatever other motives may be involved, are largely shaped by the impulse towards self-display. That is to say, they have the one characteristic in common that the dreamer is the central figure. The more the self-display impulse is thwarted by the conditions of real life, by the capacities of the dreamer or by the environment in which he finds himself, the greater will be the tendency for this impulse to find an outlet in day-dreaming. The same indeed is true of all the instinctive impulses, but for a variety of reasons the others rarely play so prominent a part.

There is no great harm in this kind of day-dreaming provided it is kept within reasonable bounds. It may, in fact, in some cases become the source of far-reaching aims and achievements. Normally it is also recreative. Fairy tales are the stuff of which the child's day-dreams are made. Hence, in the reading of fairy tales, or in the hearing of them told, the child's enjoyment is of the same kind as

¹ G H Green · *Psycho-analysis in the Class Room*, pp. 21-23.

he derives from his day-dreaming, and they in turn react upon his day-dreams. One of the dangers of excessive day-dreaming of this kind is the creation of wrong impressions of, and wrong attitudes to, reality. It is worth noting that this is a particularly significant danger of the cinema, the enjoyment of which is derived from the same source. It goes without saying that phantasies which are quite normal and harmless in a child must be regarded as definitely morbid in an adolescent or adult.

The second type of autistic thinking involves more than the mere enjoyment of pleasures that are denied in the ordinary life in the real world. It is motivated by the desire to escape or avoid difficulties with which the child is faced. Because of this fact it must be regarded more seriously than the simple day-dreaming for pleasure of the first type. It is always fraught with danger, since from its nature it necessarily involves a weakening of the active Will. This type of day-dreaming or phantasy is not so characteristic of the very young child. It appears most frequently on the eve of critical changes in life. For example, the adolescent boy or girl frequently dreads growing up, and finds an avenue of escape in phantasy. Barrie's *Peter Pan* amplifies this theme. Occasionally with very sensitive

children there may be a similar recoil from beginning school.

There is a form of grave mental disorder which exemplifies the "flight from reality" in an extreme form. The sufferer gradually becomes more and more detached from real life, and shut up within himself in the world of his dreams. As Jung has said, he is "lost in the maze of a magic garden where the same old story is repeated again and again in a timeless present." This extreme type of day-dreaming has also been depicted by Barrie in his *Mary Rose*.

The third type of autistic thinking represents a recoil from the disagreeable or painful, and is thus akin to the second. The disagreeable or painful may be in the individual's own thoughts. Avenues of escape are sought in multifarious ways, and in most cases, unless we knew the whole history of the individual, we should not be able to trace the connection between the behaviour we observe and the underlying causes, though there is usually little difficulty in diagnosing the general nature of the trouble. In the case of the child feelings of guilt, usually unnecessarily, and quite unjustifiably, awakened, may represent the core of the disagreeable from which he recoils. In other cases there may be an inferiority complex differently based, as on some physical

weakness or defect. In all cases the condition is a sufficiently serious one, demanding the most careful handling.

Juvenile delinquency is not infrequently an expression of this recoil from reality. It is impossible to say precisely what proportion of the delinquencies of young offenders is due in the main to the impulse to escape from the pain of mental conflict—we are back here on the same ground as we traversed in discussing the instincts of the child—but it is certain that this is one causative factor in a great number of cases. In such cases the delinquency usually takes the form of an impulsive act—impulsive stealing for the most part. The offender does not know why he performed the act, and may appropriate things for which he has no possible use or desire, and which he either gives away, or throws away. Such phenomena are, of course, rare in the child of the pre-school period, but nevertheless it must be remembered that the foundations for later manifestations of this kind are most frequently laid in the pre-school period. This is our warrant for mentioning them here.

As we have already seen in discussing the perception of the child, the notion of the real world, as the adult conceives it, comes gradually and slowly. Hence, the reality think-

ing of the child is not at first sharply separated from his autistic thinking. The two are for quite a long time almost inextricably mixed with one another, at least as far as the external observer can see. At the same time the child himself, when his attention is drawn to the matter, can often distinguish what he is thinking "really" and what he is only imagining. The "really" may be very different from the "really" of the adult, but it is nevertheless evidence that the distinction is one of which the child is conscious.

The transition from a close intermingling of reality and autistic thinking to a clear separation of the two is frequently exhibited in a very interesting way, when we study the acquiring of language by the child. It must be noted that the use of language is itself a proof of the presence of thinking on the third level. This is an important point, and must be clearly understood. The question "When did he begin to speak?" is always a very searching question with respect to a child's mental development. Realising this in a half-conscious way, parents are eagerly on the watch for the first signs of a child's speaking, and are usually certain that a child has begun to speak weeks, or even months, before the child is actually using language. It must be remembered that making sounds which

are remotely similar to words used by the adult is not necessarily speaking. We must have some other criterion of the presence of speech.

That criterion is furnished by the psychological function of language. Psychologically language is the instrument by means of which conceptual thinking is carried on. The nature of conceptual thinking we have already considered. It involves the separating out of various parts or aspects in any given concrete situation, and relating them in thought to one another, and to the situation of which they are parts or aspects—the thinking of relations. By means of the words of a language we distinguish the various parts or aspects of which we are thinking, and in speaking the sentence we express the various relations of the parts or aspects to one another, and, as it were, build up the whole in thought once more. It is because of this function that language is a means of communication. In speaking a sentence to another person we make that person think of the various aspects of a situation or object, of which we are thinking, and reconstruct the whole in his own mind. Thus, we have communicated our thought to him. But just because language is in this way an instrument of relational thinking, and for the communication of

the results of relational thinking, the unit of language is not the word, but rather—in the usual case—the sentence. Of course the sentence might consist of a single word, but other words, or some context, must be understood in order to complete the thought. A word by itself without any context is not really a word at all, but merely a sound.

Turn now to the language of the child. The child may make sounds, as we have said, which have some sort of resemblance to words used in the language of the adult. He may also make these sounds in connection with the objects, situations, or experiences, which the adult uses the words to designate. There is no evidence even then that he is speaking in any true sense. The only certain evidence of the presence of speech is when the sounds are used as words to separate out the different aspects of a whole and relate them together. That is to say, when the child expresses his own thoughts about a situation in his own sentences, and only then, can we say that he is speaking.

Let us take a simple illustration. The child sees a dog and says (makes the sound), "Bow-wow." This is no evidence that he is speaking, but merely that he can make that sound. If, however, he says "Bow-wow run" or "Bow-

wow bad," or "Bow-wow eat," or uses any expression of a similar kind, then he is speaking, because in this case he is stating in a sentence the result of a piece of conceptual thinking he has performed. He has perceived a certain situation; he has separated in thought two aspects of that situation—the dog and the eating, say; and he has reconstructed the situation in thought, relating these two aspects to one another in the rudimentary sentence which he has spoken. Hence, as we have already pointed out, when a child uses language we have evidence that the third level of mentality is already in operation.

But let us return to the point at which we digressed into this discussion of language. When we carefully observe the gradual development of the child's language, we can see very clearly the intermingling of reality and autistic thinking at one stage, and the clear separation of the two at a later stage. Before the child uses language at all, that is, before he begins to speak in a strict sense, we frequently find that he enjoys playing with the sounds he has learned to make, which may or may not be sounds similar to those used as words by the adult. The enjoyment derived from this play is partly due to the gratification of the positive self impulse which is involved. He is enjoying his own success. The main impulse

behind it, however, is probably the impulse to experiment, or at least this coupled with the play impulse. This feeling of being able to do something is heightened by the successful imitation of words frequently employed by the adult. The next stage is reached when the mere naming of objects yields a high degree of satisfaction. Probably the child has some sort of dim feeling of the same kind as the savage has when he thinks that the naming of an object gives him some sort of power over the object. "Name magic," it is well known, plays a very prominent part in primitive magic. That the child has some sort of feeling of the same kind can hardly be doubted. At this stage, therefore, we have the same kind of motive underlying the child's use of words or sounds as at the earlier stage, the only difference being that the gratifying feeling of success now arises, not from the mere ability to make sounds, but from the ability to exercise some sort of control over objects by naming them. The next step is taken when the child uses this newly-developed power, on the one hand, for communicating with others, and, on the other hand, for communicating with himself.

This is the phase where autistic and reality thinking are blended and interwoven with one

another. Not only does the child use language to tell stories to himself, but not infrequently he carries on long conversations with himself. Often, too, he begins to speak to another person, but it is quite evident that half the time he is not listening to what is being said to him, being interested only in what he himself is saying. The extent to which these phenomena are shown varies with different children. Some show them to a very marked extent, others scarcely at all. Obviously, however, we have here a mingling of autistic with reality thinking. As the child becomes better acquainted with, and more interested in, his material and social environments, especially the latter, the use of language as a means of communicating his thoughts to others, and of getting information from others, comes more and more into the foreground. Phantasying by means of language may still continue, but the separation of the use of language for this purpose, and its use in real communication with others, and therefore for reality thinking, becomes more and more definite.

The development of a child's language is generally some indication of the nature and limits of his conceptual thinking. Many studies have been made of the range of a child's vocabulary at different periods, and some investigators have also recorded the types

of sentence structure employed. As regards the range of a young child's vocabulary, that is undoubtedly greater than is popularly supposed. An intelligent child, brought up in a good home, may be expected to be possessed of close on 2,000 words by the time he is four or four and a half. Even the child who is brought up in a very unfavourable environment has by this time a vocabulary of some hundreds of words. The kind of vocabulary which the child possesses is of even greater interest than the actual number of words. The core of the vocabulary consists of words expressing everyday acts of himself or of others—that is, verbs. Along with these we find the names of familiar everyday objects. The relative proportion of nouns to verbs in a child's vocabulary varies at different periods. At first there is an accumulation of the names of objects with relatively few verbs. Then there is a relatively large increase of verbs, the nouns remaining almost stationary, or only slightly increasing.

When the child has acquired expressions for all the everyday acts which he can directly observe, the number of verbs becomes relatively stationary in turn, and the nouns show an increase relatively to the verbs as the environment with which he comes in contact extends.

The way in which the other parts of speech are acquired is even more interesting and significant. Speaking generally, we may say that adjectives and adverbs express qualities, conjunctions and prepositions express relations. All are, therefore, indicative of conceptual process. Adjectives express qualities which are more easily analysed out than adverbs. Consequently, we should expect adjectives to be acquired earlier, and the number of adjectives to increase more rapidly than adverbs. That is precisely what happens. With prepositions and conjunctions the case is somewhat similar. The relations expressed by prepositions are in general more concrete than those expressed by conjunctions (except "and" and "but"), and some of the conjunctions express relations at which we must expect the child to arrive very late, possibly not at all in the pre-school period. Again we find what we should expect.

Certain words are particularly significant. This is the case with the personal pronouns, and especially that of the first person, the conjunctions "if" and "because," the word "perhaps," and so on. Such words seem to indicate that definite stages of thought development have been reached. At the same time we must be careful not to read too much significance into the appearance of such words

in the child's vocabulary. Thus it has been said that the word "perhaps" makes its appearance about the age of three years, and that, since this is the age at which the child begins to distinguish the imagined from the real, the word "perhaps" may be taken as evidence and indication of this change. But the explicit distinguishing of the imagined from the real cannot be assigned in this way to a definite age. It emerges gradually, and is implicit some time before it is explicit. It is certain that the first notion of the real comes much earlier in any case. Moreover, the meaning attached by the child to a word like "perhaps" is not at the start clear-cut and definite, and depends very largely on the context in which the word is first heard and employed.

A still clearer indication of the nature and development of the child's thinking is to be obtained from the child's questions. Very valuable work has recently been done in this field, more particularly by Piaget.¹ Though the conclusions at which Piaget arrives are tentative and provisional, as they ought to be considering the fact that his detailed observation was confined to two children, they are still exceedingly important and suggestive. We may, following his general method, dis-

¹ *The Language and Thought of the Child* London, 1926

tinguish children's questions as belonging to three different categories: (a) questions of fact and name, (b) questions of explanation, and (c) questions of motivation. His classification is somewhat more detailed than this, but he is discussing the questions of older children.

The earliest type of question is the question belonging to the first category. Questions taking the form "Is . . .?" "What is . . .?" "When . . .?" and the like are illustrative of this type. To such questions are later added the types of question which have always been associated with the child—questions beginning with "why." It has often been remarked that the child's "why" can be satisfied with what appears to the adult a pathetically inadequate answer. The explanation is that the "why" of the young child does not demand the reply in terms of causality or purpose, which the adult's "why" demands, but merely a reply specifying some sort of connection with a fact the child already recognises. Piaget has distinguished three main kinds of "why"—the "why" of explanation, the "why" of motivation, and the "why" of justification. Of these only the first two acquire any degree of prominence among the questions of the pre-school child. The "why" of justification, in the sense of logical justifica-

tion, may be said to be practically absent until considerably later. The only "why" of justification to be expected at this stage is the "why" with which the child responds to a prohibition or a command, and that is generally more of the nature of a protest than a real question.

The "why" of explanation may make its appearance before the age of three, but not much before. The question: "Why do the trees have leaves?" has been recorded in the case of a boy of three. Stern argues that the earliest "why's" have an affective, rather than an intellectual character. Such a question, however, can hardly be described as rising out of feeling rather than thought, though it is certainly true, as Piaget points out,¹ that it might arise merely as an expression of wonder, rather than a real question. Assuming that it is a real question, we may suppose that either of two types of answer would satisfy the child, an answer giving any kind of reason that the child understands, as, for example, "To keep them warm," or an answer giving any kind of origin, that is familiar, at least verbally, to the child, as, for example, "They grow out of the branches," or, "God puts them there." In either case we must assume in the child a definite piece of relational thinking,

¹ *Op. cit.*, p. 165.

in order to formulate the question and to understand the answer.

The "why" of explanation introduces a question referring to a natural object or physical phenomenon. On the other hand the "why" of motivation requires an explanation for an act or state of a person, animal, or thing to which "life" is attributed by the child. This type of question comes somewhat later in the child's development. One might infer from the relative increase of this "why" of motivation that the child's interest is turning more and more towards phenomena of the inner life. This, however, would require considerable qualification. As we have seen, the child does not distinguish clearly between the living and the not-living until, at the earliest, late in the pre-school period. This involves a naive anthropomorphism, and many of the "why's" of motivation are consequently scarcely distinguishable from the "why's" of explanation. This "why" must therefore be taken to signify a widening in the range of the child's thought, rather than a change in the direction of his interests. Its prominence also to some extent indicates a difference in type of mentality, a difference corresponding to, and fore-shadowing, the difference between what Jung calls the "introvert" and "extravert" types—that is, between those whose interests

turn naturally inwards, and those whose interests turn naturally outwards.

At a still later stage in the child's development the "why" is supplemented by the "how." When it first appears the "how" is merely a variant of the "why" of explanation. Later it implies and means something more than this. It implies a more detailed analysis of phenomena, and a clearer apprehension of relations, though we cannot as yet say that it implies objective causality in the strict sense. Such questions as: "How is snow made?" "How do ships move in the sea?" and the like are obviously indicative of an important change to an objective point of view from a point of view which is egocentric, or at least subjective. This change, however, does not show itself until late in the pre-school period, and does not become predominant before the age of seven or eight. It must never be forgotten that there is no sudden transition from an egocentric to an objective point of view. There is rather a continuous process of development, the emphasis passing slowly over from the one side to the other.

The development of the notion of objective causality brings this out very clearly. The child has first in himself the experience of causal efficacy. His own experienced activity

produces results desired by him. The experience is, of course, long prior to the explicit thought of himself as cause. We have already seen that there is, to begin with, a period of omnipotence, which is succeeded by a period of magic. The significance of this change from our present point of view is that changes produced in things are regarded (though not, of course, in explicit thought) as resulting from actions simultaneously performed by the child, by a mere extension of the causal efficacy, which he experiences in those actions of his own directed towards desired ends. The period of magic is in turn succeeded by what we may call the "period of anthropomorphism," which is the first sign of a transition from the subjective or egocentric to the objective point of view. The child now attributes to things the same activity and causal efficacy which he experiences in himself. In other words, he reads himself into things.

Finally comes the change to purely objective causality. Not one of these transitions, however, is abrupt. All are very gradual, so that the first indications of a change in point of view can be traced long before the period at which we can say that the change has definitely taken place. The notion of objective causality, for example, is not fully developed before the age of at least eleven or twelve. Yet, as

we have seen, the signs of its coming can already be discovered in the questions of the child towards the end of the pre-school period.

It has long been customary to assert that the young child is incapable of abstract thinking. This is another statement which requires very considerable modification and qualification. It is true that before the age of eleven or twelve there is little facility in abstract thought. That there is a capacity for abstraction much earlier than this, however, is clearly proved by the ability to deal with number. Probably, therefore, it is not the capacity for abstraction that is lacking, but the interest in the abstract, before the age of ten or twelve, and this interest is lacking in different degrees in different children.

The development of number concepts is interesting in several respects. They represent a high degree of abstraction, and may nevertheless be developed at a very early age. The mere counting, "one, two, three," does not prove that the corresponding concepts are present. Hence, we must not be surprised if we find children who have apparently no difficulty in counting up to ten, or even twenty, and counting correctly as far as concrete objects are concerned, and yet have the greatest difficulty in dealing abstractly

with numbers like three and four. In some cases, indeed, number concepts are not developed in the pre-school period at all, and not till after two or three years of school life is any significant progress made in this direction.

CHAPTER IV

INFANTILE EXPERIENCE

WE have all been babies: yet it is impossible for us to remember, and very difficult for us to imagine what it feels like to be a baby. It is very hard to say at what point and in what way experience may be said to begin. The marvellous development of the pre-natal period is probably not accompanied by anything to which we could give the name consciousness if by the word we understand anything like our own consciousness; life is sensed: it is not known. There may be fluctuations of feeling, but, when all goes well, the babe's condition for long stretches of time must be one of absolute content. The present is all in all; it is unshadowed by either the future or the past.

At birth the little living thing is pushed rudely enough into an environment in which it has to breathe for itself, take in nourishment and digest for itself. Death is the

penalty of failure to respond to these new demands. Birth is thus the first hurdle that life must leap, and it has been conjectured that in it we have the prototype for all occasions when danger is apprehended; the fear of later days moulds itself on the sketchy outline of the infant's stifling struggle for breath.

The babe now at times opens his blue eyes upon our world, but he does not see our world. For him no colours yet exist, no shapes stand out clearly; all is vague, shifty, indeterminate. One reason for this is that his organism is still very unfinished. During his first year his brain—the organ most closely associated with mind—grows at a stupendous rate, adding to its bulk about one cubic centimetre every day. This growth is brought about largely by the impact of the environment on the eye, the ear, the skin and other sense organs. But besides this growth directed from without, there is also growth from within—growth determined by the mysterious life forces which *are* the Child.

At this stage, and all through what has been called the pre-school period, the infant is almost entirely at the mercy of those whose duty it is to provide and care for him. It is practically certain that the different treatment meted out to babies goes far to account for

the differences in character and ability found in adults.

During the early months of life the first need is Order. Life should fall into a kind of rhythm, periods of food and sleep alternating, the night being marked by a double sleep period. The daily bath makes a deep note in the life of the fortunately situated child. It also perhaps revives the Nirvana-like bliss of the pre-natal period, which in later years may be projected into the future and give Man his idea of a state of perfect happiness which is to be attained, but never is attained. For the child's physical welfare regularity is important; but for his mental welfare it is probably even more important. For regularity impresses on the child that this is an orderly world—a world in which effect follows cause, and cause produces effect. When the child first begins to observe, it cannot be at all evident to him that such is the nature of things. Many things seem to happen in an arbitrary and incalculable manner, but if in infancy order and regular succession have made themselves part of his being, it is surely not fanciful to suppose that his mind will never be satisfied until his partial and self-contradictory experience has been integrated and harmonised by law. If, on the other hand, a disorderly world, in which anything

may happen at any time, is stamped deep on the fresh mind and nervous system of a baby, it is at least possible that that child will pass through life untouched by that divine discontent with the irrational appearance of things which has created the mighty framework of Science, and thus tamed the powers of nature to become the servants of man's dreams.

The stress that modern psychologists lay on the experience of the infant is by no means so new a doctrine as many people think. More than a hundred years ago Erasmus Darwin, grandfather of Charles Darwin, wrote thus:

"When the babe, soon after it is born into this cold world, is applied to its mother's bosom, its sense of perceiving warmth is at first agreeably affected; next, its sense of smell is delighted with the odour of her milk; then its taste is gratified by the flavour of it; afterwards the appetities of hunger and thirst afford pleasure by the possession of their object, and by the subsequent digestion of the aliment; and last, the sense of touch is delighted by the softness and smoothness of the milky fountain, the source of each variety of happiness.

"All these various kinds of pleasure at length become associated with the form of

the mother's breast, which the infant embraces with its hands, presses with its lips, and watches with its eyes and thus acquires more accurate ideas of the form of its mother's bosom than of the odour, flavour, and warmth which it perceives by its other senses. And hence at our maturer years, when any object of vision is presented to us which by its wavy or spiral lines bears any similitude to the form of the female bosom, whether it be found in a landscape with soft gradations of rising and descending surface, or in the forms of some antique vases, or in other works of the pencil or the chisel, we feel a general glow of delight which seems to influence all our senses; and if the object be not too large we experience an attraction to embrace it with our lips as we did in our early infancy the bosom of our mother."¹

This passage forestalls in a remarkable manner the teaching of Freud, who by his technique of psycho-analysis has done so much to lay bare the thought processes of the little child, and to demonstrate the far-reaching influence of the suckling period.

To the period immediately preceding and immediately following upon birth the Hungarian psychologist, Ferenczi, has given the

¹ Quoted from *Dreams and Education*, by J. C. Hill, M.Sc.

name of the period of Omnipotence.. One can see how in the first few days of life we all conspire to make the babe feel himself all powerful. We must remember that although we see and hear him, he does not see and hear us. At most, vague, whitish forms—our faces—flit across the shifting grey of his field of vision. When, in his baby way, he realises he is uncomfortable, straightway his cause of discontent is removed: he feels once more at peace within himself. *We* may know that his mother has lifted and fed him, but *he* does not know this. It is to him as if his wish had itself been potent to change his condition for the better.

Gradually, as he becomes able, by appropriate movements of the eyes and head, to keep moving objects for an appreciable time within his field of vision, he begins to realise that he has gigantic attendants—genii—who have some sort of existence apart from him, and whose business it is to satisfy his wants. His wants become more varied and numerous. He stretches out his hands when he wishes to be lifted and borne along: he stretches towards a toy and an obedient giant places it within his reach. This period Ferenczi calls the period of Omnipotence with the help of magic gesture.

As the days pass, baby discovers that crying

is not the only magic sound which is effective in enforcing his decrees. He finds out that special sounds belong to special things. When mother speaks of the clock, he knows just where to look when she says "Clap handies," he knows just what to do to gain the admiration he is beginning to value very highly. He finds he can produce some of the sounds himself. This in itself gives him great pleasure, and his pleasure is multiplied tenfold as he realises the admiration his cleverness excites. Now, when he wants something, his mother often says to him, "Say *Ta*, Baby, and you will get it." He does say *Ta*, and he does get it. *Ta* becomes a word of power—a magic word. Sometimes he coquettes with his mother, refusing to say the word. He may even revert to his old gestures or, if they fail, to the cry of still earlier days. The ladder of life is slippery to climb, and even at this stage it is possible to lose grip, and drop back a rung or two.

With some favourites of fortune words and gestures may all through life retain something of their magic. The son who coaxes his mother, the daughter who sways her father, the wife who turns her husband round her little finger, are people who are bound to retain much of their early faith in the magic of words. But the real sense of omnipotence

with the help of the magic word must receive some rude shocks before the child is two, and in some cases has almost ceased to be by the time he is five. Yet the effect remains, and may manifest itself in very disconcerting ways.

In attempting to reconstruct the child's early experience we see that there is much else besides the easy gratification of his desires which is calculated to give him very false notions of the world as it is. We have already noted, in passing, that at first he cannot keep moving objects within the field of his vision. To him they must disappear and appear again in an arbitrary and incomprehensible way. During these periods of absence do they exist, or do they not? Do they perhaps "go out" like a candle? A baby at a very early age will turn in the direction of his mother's voice. What happened to her, then, when she last disappeared? Did she wrap herself in a cloak of invisibility, or did her seven-league boots carry her in a flash to the remote corners of the earth?

Another wonderful thing—though this is in some respects a misuse of the word, for to a baby everything is wonderful or perhaps nothing is wonderful—is the way in which things change in size. His mother is often a tiny little figure that he can scarcely see, whereas at other

times she is 'enormous—even bigger than he is himself. Of all the people and objects round him none retains the same size or even the same shape for more than a few seconds at a time.

We begin to see that in many ways the world of the little child resembles the world of the fairy stories. This is probably one of the reasons why he accepts these so easily and so literally. He has himself been a magician. He has used words as potent as "Open, Sesame," gestures as wonder-working as the rubbing of Aladdin's lamp. Shoes of swiftness and caps which make the wearer invisible have formed part of his daily experience. Many a banquet has spread itself on a magic cloth before his eyes. When his mother is displeased with him does she not visibly change from a paragon of beauty to a monster of ugliness? Do giants exist? Of course they do. Did a beanstalk grow up to heaven in a single night? Why shouldn't it? There is little you can tell him of Fairyland that he does not know already.

It is evident that the length of time the child remains in any of the phases we have endeavoured to depict must depend to a very large extent on environmental conditions. When an infant's cries do not cause him to be lifted, when caprice plays little part in the

regulation of his day, the feeling of omnipotence in the case of an intelligent child will pass rapidly into the discovery of the real causes at work. Fairy stories and many of the pictures now supplied to little children may prolong and strengthen the infantile attitude. The child's own natural attitude all along is that of the scientist; he is always anxious to know the true facts. But with regard to magic he may well ask, like many an older person: Am I not entitled to believe the evidence of my own senses?

Now, it may be said: Why hurry the child through this period? Surely his innocent belief in fairies forms much of the charm of his personality; why turn him into a matter-of-fact adult before his time?

To attempt to turn the child into an adult before his time would be very mistaken policy. Who would expect to get a better poppy by pulling asunder the green leaflets of the bud? Or to obtain a finer butterfly by breaking open the chrysalis? But if the child believes in fairies, he believes in them in a matter-of-fact way. To him they are in the same world with, they are made of the same stuff as, the birds and the bees and the dragonflies and all other living creatures. Now, this belief of his is not true. And it may definitely retard his development at a time when it is all-

important that there should be no drag on that development. A belief in magic tends to prevent the search for real causes, so that if we venture to interfere with the child's natural growth in any way it should rather be in the direction of helping him to leave behind his inevitable first conception of the nature of things. We should certainly not add to his difficulties by giving to crude primitive theories the weight of our adult authority.

In considering the mental development of the infant during the first few months of life we must distinguish carefully between lack of intelligence and ignorance or lack of knowledge. The babe's intelligence may be great or small; his ignorance is bound to be colossal. To him many questions are open which we have solved so long since that we do not even recognise them as questions which an intelligent newcomer is bound to raise. Thus, a baby may pull his own hair so hard that he cries with pain, and yet he does not know that it is his own act that produces the pain.

The marking out and taking possession of the body is the great task of the first few months. A notable stage is the stage of hand study. This comes normally about the third or fourth month, but I have seen it, in one

backward child, at the age of eighteen months, and in another at the age of two years. The expression of attention that accompanies this study is very marked, and shows us that the baby is doing really hard intellectual work. Sensations are perhaps rather vaguely localised for a considerable time: I have seen a toddling child knock the side of her head against a piece of furniture and immediately rub the other side.

The child's interest in his hands is largely theoretical; he likes to watch their movements and the way in which they change their shape; no doubt also he enjoys the muscular sensations which come to him from the moving parts. But his interest is also practical; his hands very soon become tools by means of which he can grasp and convey objects to his mouth, still the most sensitive organ of touch. Letting go at the right moment is more difficult than taking hold; and a baby still in arms will show pleasure when he can give the letters to Daddy.

At first the world revealed by touch and the world revealed by sight are not unified. A baby of three or even four months will present an appearance of groping if held in such a way that his hand comes against objects. He does not look at the objects touched as an

older person would at once do. He fumbles them. Stretching for things seen begins in most cases at about four months. When touch and sight definitely act as signs the one of the other, the infant may be said to have established or discovered the unity of the world.

This does not, of course, mean that the infant's world is yet at all like our world. Probably it is the learning of language that forces his thought into the same mould as that of his day and generation. But even at this stage he is beginning to realise that there is a stable order outside of himself, and the study of spatial relations, and of the behaviour of things in space occupies most of his working hours for several of the early months.

Habit. Nearly twenty years ago the Russian physiologist Pavlov described a series of experiments by means of which he had succeeded in establishing in dogs responses to arbitrarily selected stimuli which appeared to be of the same nature as reflex responses. The response that he first studied was the flow of saliva which occurs automatically when food is placed in a dog's mouth. He found that if another stimulus, such as the ringing of a bell, or the showing of a light was brought into

operation twenty or thirty times along with the natural stimulus—the placing of food in the mouth—thereafter the arbitrary stimulus if applied alone will bring about the reaction. A connection of stimulus and response established in this way Pavlov called a conditioned reflex.

In recent psychological work on the young child the principle of the conditioned reflex has been widely and boldly applied. Thus, when manifestations of fear or anger follow upon apparently inadequate stimuli, it is maintained that these stimuli are effective because of their previous association with adequate stimuli. The fear or anger behaves as a conditioned reflex. As *any* stimulus accidentally occurring along with the natural one may become effective, the fear and anger reactions become highly individual.

It may, however, be questioned how far the results of experiments on adult animals can be regarded as throwing light on the phenomena of infancy. When we carefully observe a baby we find that this careful training to the association of a specific stimulus with a specific response is not necessary. Such arbitrary associations are certainly made by the baby, but very often one "lesson" is sufficient to establish the connection. Very easily in the plastic brain of infancy can a "rut" be formed,

along which the nervous impetus will pass unless definitely diverted therefrom. Such repetition appears to be in itself satisfying to the child, and at a very early age he will, if he can, bring it about himself or will demand it from others. Thus, a baby, if accustomed to be fed by one person, will often, even if hungry, definitely refuse food from another. A slight difference in holding him, or in the vessel from which he takes the food will, to him, make all the difference. If he has once had a safety strap in cot or perambulator, he may indicate great dissatisfaction if he is left without it. In a hundred ways he indicates that repetition is one of the basal satisfactions of life.

This tendency to repeat seems to be the foundation of habit, and of that kind of memory which has been fitly called habit-memory. It has been commonly said that a long series of repetitions of the same thing is necessary if we wish to form a habit. This statement seems to need a good deal of qualification—especially with respect to infants. In them habits are formed with extraordinary ease, and may sometimes be so strong as to be extremely inconvenient and troublesome. I have already emphasised the advantage from the point of view of both physical and mental development of order and regularity. I have now to point

out that over-great stress on this regularity will tend to foster that automatism which is such an interesting feature of human life. One does not wish even a child to be the slave of his habits. If the habits are good, perhaps little harm is done. If the child is intelligent, he has qualities which will enable him to be master in his own house all in good time. If the habits are bad, even an intelligent child may find it very difficult to emancipate himself from their tyranny.

The word Habit is usually employed to denote an action or series of actions automatically performed and frequently repeated; from these acts attention is withdrawn, so that we often perform them without being aware that we have done so. Their feeling tone is low; that is, no special pleasure accompanies their execution, although some people feel distinct discomfort if their habits are interfered with. In children, however, we find a whole series of habits which are accompanied by a high degree of feeling tone. In them the perpetrators take very great pleasure; it appears, indeed, that it is because of the pleasure that accompanies their performance that they have become established as habits. They attract our interest and demand discussion here because they are bad habits, and sometimes are the cause of great perplexity in

parents because of the difficulty of eradicating them.

One of these habits is masturbation, which has been reported as occurring in babies under six months. Others are the eating of indigestible substances such as earth, ashes, etc., the sucking of the thumb or finger or tongue or cheek, biting the nails, picking the nose, banging the head, or in many other ways producing some form of sense stimulation.

Of such habits as these Dr. John Thomson, whose experience of the ways of young children was probably unrivalled, says, "Some of them may, indeed, grow out of apparently automatic actions to begin with, but by the time that they are established as fixed habits they are not unpremeditated, like the others, but are resorted to of set purpose because of the great gratification which they afford to the child's feelings. They are certainly to be regarded as minor psychoses" (or diseases of the mind).

In most children these habits tend to disappear with increase in age, and with the establishment of a wider circle of interest. In Dr. Thomson's opinion they often do no great harm when unaccompanied by excitement; when they produce emotional disturbance, however, he considers that they must

be very bad for the nervous system, and should be put a stop to as soon as possible. He also thinks that their significance for the child's future is worthy of attention. The presence of such habits in any great degree may indicate a morbid tendency in the child which should be taken into account in his training.

The curious way in which such habits may be inter-related with the emotions is shown by the following case of Dr. Thomson's:

"A fat, rosy, energetic little girl, aged two years, was brought to see me for a slight attack of indigestion. On examining her I noticed a curious, large, flat swelling like a big corn on the middle knuckle of her right forefinger, and on inquiry I elicited the following facts: Ever since she was about a year old she had had the habit of putting the knuckle of her right forefinger into her mouth and biting it whenever she was angry. When she wanted to strike another child or a dog that had annoyed her she seemed unable to do it unless she had first put that knuckle between her teeth; she then struck her enemy freely with her left hand. When she was done hitting with her left hand she would take the right forefinger out of her mouth, but not before. If, however, the finger was taken out of her mouth sooner, either accidentally or by

another person, she seemed no longer capable of going on with her revenge. Her mother said that the child bit the same place if she were afraid of anything, and on being scolded, but on no other occasion. She had no other peculiar habits."

In dealing with such habits one can prevent the action occurring by some form of mechanical restraint. This was done in the case just quoted with entirely satisfactory results. It cannot, however, be too strongly urged that the mother or nurse must treat the matter in an entirely matter-of-fact and unemotional manner. The habit is not to be regarded as "naughty." In particular no threats as to its dire consequences must be uttered. It has, I think, been definitely proved that such foolish threats even at this early age may do permanent harm. Every effort must unobtrusively be made to turn the child's attention away from the habit and on to something else that will give him satisfaction.

Better than cure is, of course, prevention. In some cases positive habits, as of sleeping posture, etc., may be formed which will be inimical to beginning any bad habit. Moreover, if the importance of not allowing such habits to form is realised during the early months, the mother can moderate incipient

excitement or direct it along wholesome channels.

Regression. The importance of infantile experience consists largely in this—that it seems possible for the human being under certain conditions of stress or debility to recede to a condition which to some extent reproduces his primitive reactions and ideas. A well known example of this is the childishness of the old man. This is not a condition that comes to all old men. But it comes to many. Such regressions do not as a rule go right back to infancy. Some nervous breakdowns, however, present features which for a long time seemed wholly inexplicable. Now, however, we are beginning to see that explanation is possible if we accept the theory that infantile beliefs may in adult life break into consciousness with irresistible force. We then have delusions which take a variety of forms. In one of the early years of the great war there came to see me a young man who was preparing to go to the front. He told me in all seriousness that he by his thought was able to affect people and even animals. He gave me several examples of this. To me they seemed quite unconvincing, but to him they were irrefutable. There had come over him in such a way that he could not dismiss it from his mind the

infantile belief in the omnipotence of thought. I was not surprised to learn later that he was suffering from a nervous breakdown, and was working on the land in an endeavour to recover his mental balance. Later, he was one of the victims of the war, and perhaps was thus saved from an even sadder fate.

CHAPTER V

THE TODDLER

THERE is a great difference between being a baby and being a toddler, and sometimes the transition is made far too suddenly, with very little consideration for the feelings and point of view of the dethroned king. For through his very helplessness, his absolute dependence on us, the baby makes to most people an irresistible appeal; he enlists all our instincts in his service. His weakness and ignorance give our self-assertive tendencies full scope, and at the same time call into play all our protective impulses; his rapid growth excites our wonder; his beauty and charm delight our senses. Moreover he is no trouble. He sleeps most of the time, and he stays where he is put. It is true he ties his mother to him, and he may at times rob her of a night's rest, but the fact remains that he pays his own way all the time.

The toddler is different. He is a great deal of trouble. He has often no idea of obedience,

and he does not stay where he is put. In a small house where there is no proper provision for a wholesome canalising of his energies he is a danger to himself and to others. A baby, it is true, has to be washed and dressed and fed, but in these respects his demands are regular and reasonable. But at any moment a toddler may have to be undressed and scrubbed from head to foot, and all his clothes may cry aloud for the wash tub. Moreover, his will is beginning to assert itself and to clash with ours, and in these encounters it is not always the adult who comes off victorious. These considerations go far to explain the fact that there are many women who are splendid nurses so long as their charge is an infant, but who are very bad for him when he becomes a toddler.

So far as behaviour is concerned, the two most important tasks of the toddler are the acquisition of language and of locomotion. In the meantime we propose to leave these on one side, in order to consider how this first part of the human journey from the irresponsible Eden of infancy can be most safely and satisfactorily accomplished.

Development of Interpretation of Experience.
The baby, as we have seen, has his own way of regarding the world, but even he occasionally

has glimpses of the world of science, the world which is the expression of law. Such a flash of insight came to Patricia when she was nine months old. She was sitting on my knee at a table, and I was building for her a tower of little cubes. She strained towards the tower, and each time I completed it, I let her hand reach it, and the tower fell. She was absolutely serious. her whole mind was concentrated on what was happening. Suddenly she surprised me by giving vent to a little Ha-ha laugh, a thing I had never before heard her do. As we continued the occupation, her laughter became louder and louder, till at last it brought her mother in from next room to know what was happening. Patricia's jubilation was, I think, due to the fact that she found herself able to foretell what was going to happen; she had come to *expect* the fall of the tower, and she had a faint premonition of what the acquisition of this power of prophecy means to man. The regularity of her life had, of course, prepared the way, and she had no doubt by this time recognised and established many constant associations, but here she was herself an agent; she was producing an effect that she could foresee.

Each day that he lives the toddler is acquiring more skill with those wonderful tools, his

hands. He tries many experiments, and he begins to become effective within the limited field of his activities. With hand and eye he tirelessly studies the varied objects around him. He discovers that balls will roll, and that cubes will stand; that coal is dirty, and that glowing cinders are hot. Some of his experiments reveal to us how very much he has to learn. For example, Patricia at fifteen months having found that her toys would stand on horizontal surfaces, made many attempts before she convinced herself that they would not adhere to vertical surfaces.

In these questions put to nature the child's procedure appears extremely logical; but we must not be misled into thinking that his thought processes are always like our own. Many things are possible to the young child which to us are so impossible that they are inconceivable. Perhaps in the early stages the individual human mind still passes through phases which resemble closely the mentality of the animals and of the lower races of mankind. In his book entitled *How Natives Think*, Lévy-Bruhl says "In the earlier stage the dictum deduced from Hume's argument, that 'anything may produce anything,' might have served as a motto for primitive mentality. There is no metamorphosis, no generating

cause, no remote influence too strange or inconceivable for such a mentality to accept. A human being may be born of a boulder, stones may speak, fire possess no power to burn, and the dead may be alive. *We* should refuse to believe that a woman may be delivered of a snake or a crocodile, for the idea would be irreconcilable with the laws of nature which govern the birth even of monstrosities. But the primitive mind, which believes in a close connection between a human social group and a snake or crocodile social group would find no more difficulty in this than in conceiving of the identity of the larva with the insect, or the chrysalis with the butterfly. . . . To the primitive mind everything is a miracle, or rather, nothing is; and therefore everything is credible, and there is nothing either impossible or absurd."¹ These words though written of the primitive mind apply almost equally well to the mind of the child

For the child also "anything may produce anything." Boulders may give birth to men, men may beget animals; there is nothing incredible, nothing that is a miracle.

According to Lévy-Bruhl, the primitive mind with respect to certain matters is inaccessible to experience, and does not recognise the law of non-contradiction. Thus, a person can be

¹ P. 377.

himself and at one and the same time another being, he can be in one place and at the same time in another place; for example, "the Bororos give one rigidly to understand that they are araras (parakeets) *at the present time*, just as if a caterpillar declared itself to be a butterfly."¹ A mind trained on scientific lines cannot understand this position, but to an infant it would present no difficulty whatever.

Similarly, in a young child we may often remark that inaccessibility to experience which is well exemplified in the following narrative given by Du Chaillu in his *Explorations and Adventures in Equatorial Africa*: "As I came from seeing the king," he says, "I shot at a bird sitting upon a tree, and missed it. I had been taking quinine, and was nervous. But the negroes standing around at once proclaimed that this was a fetish-bird, and therefore I could not shoot it. I fired again, and missed again. Hereupon they grew triumphant in their declarations, while I . . . loaded again, took careful aim, and to my own satisfaction and their dismay, brought my bird down. Immediately they explained that I was a white man, and not entirely amenable to fetish laws; so that I do not suppose my shot proved anything to them after all."

¹ *How Natives Think*, p. 77

Any one who has intimate experience of children¹ must have noticed in them a similar tenacity of belief and a similar ingenuity in explaining away hostile evidence.

According to Lévy-Bruhl, the thought of the primitive is for the most part guided by the law of participation, things are bound together by spiritual ties, and are the seat of spiritual forces which are the effective agents in causation. An important and apposite example of the law of participation is found in the relationship between a picture of a man and the man himself. The picture participates in the nature of the man so that if injury is inflicted on the picture, similar injury will befall the man. The North American Indians refused to give Catlin permission to take their likenesses, because they would thus be parting with some of their own substance, and putting themselves at the mercy of any one who might possess the portrait. The attitude of little children towards pictures may, I think, well be explained by supposing that at this stage their minds also to some extent exemplify the law of participation. Thus, one night in showing Margaret (2.6) a picture with a fire in it I put my finger on the fire; she at once became greatly concerned lest I had hurt myself. Now, I cannot believe that the child thought the pictured fire was a real fire, but

I can believe that in her vague baby way she thought that it participated in the nature of the object which it represented.

Another example of the recognition of mystic participation together with impermeability to the evidence of the senses was supplied me by the same child at about the same age. I had a little celluloid doll of which she was very fond, and which was called the baba. I was wont to make the baba talk in a little squeaky voice; Margaret would watch my lips intently as I did this, but she fully believed the remarks came from the baba, and would always address her own replies to the baba, not to me. That the baba's voice should come out of my lips presented to the child no problem whatever.

Of the North American Indians Catlin writes: "They pronounced me the greatest medicine-man in the world, for they said I had made *living beings*—they said they could see their chiefs alive in two places—those that I had made were a *little* alive—they could see their eyes move—could see them smile and laugh, and that if they could laugh, they could certainly speak, if they should try, and they must, therefore, have some life in them."

Children sometimes address pictures with great earnestness as if they fully believed that the pictures could speak if they would only

try. Thus Margaret (2.10) looking at a picture of two babies, "Hasn't that baby an awful face?" I said, "The other one wants her to be friends." M "Will she be friends?" "I think she's not very sure yet." M earnestly to the picture: "Are you welly sure?" To me: "Is she welly sure?"

One day when she was amusing herself by cutting figures out of a catalogue Margaret's monologue took this form: "Don't be frightened; I won't cut you, lady. . . . You needn't be nervous. She is a big baby this one, thinking I'll cut her hand off. I won't cut her hand off. This lady won't be so nervous because I didn't go so near her head. . . . I suppose you wouldn't like to be cut? 'No, I'll be nervous if you cut me.' I'll cut you out. 'Oh, I was going to be nervous if you cut me out.' The lady was nervous, mother, when I cut her out." (Age, 4.5.) At this stage the child herself could so far participate in the nature of the pictured lady that she could express her feelings.

Again with regard to place one finds that the attitude of the primitive mind is very unlike that of the scientific mind. To the latter all space is homogeneous nor is the nature of an object affected by the place it is in. To the primitive there is participation—a mystic union between the place and the

things it contains, so that two drawings, for example, which to us appear exactly the same, may to him be quite different if they are in different places. That in the little child there is a tendency to regard the place as having mystic influence seems to be shown by the following observation which I owe to a student. A toddler about eighteen months old had hurt her leg. She ran to the fire, heated a cloth, but before attempting to tie it round the injured part she returned to the place where she had received the hurt. Only here apparently could the remedy be efficacious.

All religions have their holy places. Even at the present day the use in the interests of our everyday life of a building consecrated for worship would shock the susceptibilities of many people. The childish mind probably never becomes insensitive to the compelling power of the place.

Most people have observed the stimulating effect on memory of place associations. If one revisits a place after a long interval one is surprised at the numerous details of one's experience there that come thronging into one's mind. In little children the strength of these local associations is shown by the way in which they determine their activities. When the mother of a defective child asserts

that he has a splendid memory we nearly always find that this means that he remembers where things have been put. It is a place memory. A little child visiting a house after an interval of some months will run at once to the cupboard whence the toy that amused her on the last occasion was taken. It is said that among the North American Indians and other primitive peoples this topographical memory is something marvellous. A place once seen, a journey once taken leave impressions on their minds which are never erased.

It is easy to see how those strong local associations help towards the unification of the child's experience. They give rise to expectations, and so, as it were, enable him to lay hold of a large mass of experience all at once, to over-ride it, and possess it, not merely be carried along passively on its tide.

Social Experience. The baby studies people, and gains considerable practical knowledge of his own power over them. An infant in his cot crying to be lifted will give a disgusted but at the same time a very knowing look at a person coming to see what is the matter who he knows will not lift him. To any one who yields to him he may become a veritable tyrant, compelling his victim to pace the floor in the small hours of the night. A baby who finds that he can get his own way if he only

screams long enough may continue to dominate the household after he has reached the toddler stage by means of what are often called temper tantrums. Such a child was Helen, aged two years five months. According to her mother she had a "terrific" temper; she would lie on the floor and kick and scream whenever thwarted in the very least. In appearance she was a quiet, demure, neatly dressed little girl, who sat quietly beside her mother until the latter left her to go into the consulting room. She then threw herself on the floor kicking her heels and yelling at the top of her voice. This conduct she kept up for half an hour, until her mother returned. At home these attacks were sometimes so violent that at the end she would be blue in the face, and her whole body would become rigid.

In most cases people realise, before matters have gone so far as this, that it is most unsafe to train a child to think that all wishes come true for him who makes enough disturbance. There are, however, other means of gratifying certain strong desires. One of these strong cravings which often gives a great deal of trouble is a craving for notice. One might almost say that no child is too young to feel the satisfaction which arises from being the centre of the stage. When Margaret was about fourteen months old she would, as she hitched herself

about the floor, direct little squeals at her grandfather as he sat quietly reading. When she succeeded in attracting his attention she would feign to be entirely engrossed in her own affairs.

This playing for notice very commonly takes the form of refusing food. Sometimes the food that is refused is only that which the mother is particularly anxious for the child to take. The child loves to be coaxed, and sometimes the resistance which is necessary to obtain the coaxing become a resistance awakened by the food itself, so that he becomes literally unable to take it, even when he appears to be doing his best to be compliant. When a fuss is made about a child's conduct, there is very frequently created in him either an irrational impulse or an inhibition. The refusal of food sometimes becomes an inhibition applying to all food, so that nothing is taken except under compulsion, and then sickness may follow. I have heard of a case—characteristically the child was an only child and the son of a devoted mother—where the inhibition spread to sleep, and to the performance of the bodily functions. By the time the doctor was consulted, the child was a very sick child. Fortunately the inhibition often holds only with regard to one adult. A child may take anything from his nurse, but be very finicky and difficult with

his mother, whose anxiety for his well-being makes her less assured in her dealing with him.

These inhibitions are very apt to affect conventional speech and conventional acts of politeness. Mothers are usually extremely anxious that their children should appear to their friends and acquaintances to be well brought up, and unfortunately it is often only when the occasion arises that it occurs to them to give the instruction required. Thus, a mother may suddenly, on seeing an acquaintance in the street, realise that her little boy is old enough to give the customary salute. "Take off your hat, dear," she says, "there is Miss Smith." The child stares to see if he can find Miss Smith, while the command to lift his hat finds him deaf, or perhaps causes him to wonder why at that particular moment he should do such an extraordinary and meaningless thing. If the mother shows disappointment or anger at his failure to respond, it is quite likely that she will produce an inhibition with regard to the act, and have great difficulty in teaching it.

Similarly the words "Please" and "Thank you" are often inhibited. It is not difficult to realise the child's position if we will consider the matter calmly. With us many words and expressions have been used so often that when

the appropriate occasion arrives we drop them out automatically. We do not do this in a language which is foreign to us. Then we have to think what we are saying, and in moments of excitement or fatigue we may lose our words altogether. We must realise that a little child is a learner, he has not yet formed speech automatisms; when his whole soul is absorbed in the joy of a present just bestowed on him he should not be expected to remember what he ought to say.

Unmanageable impulses are formed in much the same way as unmanageable inhibitions, and are often even more troublesome. Sometimes a child takes something that his mother does not wish him to have. If his mother says quietly, "Bring that to me, baby," or, perhaps better, shows the little one how to put it carefully in its own place and explains that mother likes it to stay there, then the child has had a good lesson and generally takes it. But if the mother becomes excited and rushes at the child to take the precious object from him, the child is very likely to fling it away rather than give it up. Breakage wholly unforeseen by the inexperienced sinner may ensue. Then comes scolding and perhaps punishment. Through all this fuss an irresistible impulse is begotten which may give rise to indescribable trouble before it is subdued.

Disinherited. Every baby, unless he is one of twins or triplets, is for some time an only baby, and so has the opportunity of forming the infantile interpretations of experience described in our last chapter. At first sight it may seem that this statement is true only of the first baby; but a moment's reflection will convince us that for some considerable time the other children in the family will appear to be just units in the crowd of baby's worshippers. As soon as another baby arrives we have an ex-baby, a dispossessed potentate, and the way in which this transition is handled is of great importance for the future.

A French writer who shows keen insight into the child's mind brings home the situation to us thus:

"Trot has a little sister.

"It is not too soon!

"One evening, one cannot say exactly when . . . at the hour when it is very cosy and warm and comfortable in the corner by the fireside near the lighted lamp, at the hour when tender thoughts enter the mind and a little anxiety is felt as night falls and great shadows fill the corners of the room—on one of these evenings at the beginning of winter, Mamma took Trot on her knees, and with many fond embraces said to him:

"'Trot, would you be pleased to have a little brother?'

"Trot was busy playing with Mamma's watch chain. He considered a moment, then replied:

"'No, thank you. If it is to please me I would rather you bought me a live tortoise. Because, you know, I should have to lend him my playthings, and he would break them. Then that would annoy me.'"

Trot's mother laughs, and begins to win her little son over by dwelling on the pleasure he will find in having a little playmate. With maternal understanding she appeals also to his self-display instinct, dwelling on the fact that he will be able to show a good example to the little brother. But to Trot's mind the disadvantages came first, and they are very real.

The situation is a delicate one, and the ex-baby deserves more sympathy than he often gets. I asked a young mother who had realised that Psychology could help her in bringing up her children, whether she prepared Gavin for Nan's arrival. Her account of the measures she took is, I think, instructive.

"Always," she says, "when friends brought little babies to the house I showed great affection for them. Gavin imitated me, and looked upon it as a great favour to be allowed to kiss the little one on the head. In picture books

babies were 'loved'—patted and kissed. Later on, when Gavin could speak, a baby was always referred to as 'a dear little baby.' Then the week before Nan arrived I left the bedroom prepared for me open. He came in of his own accord. As soon as he saw the cot he asked where the baby was. I said it was coming very, very soon, wouldn't that be lovely? Very happily he said, 'It would be lovely.' 'Would you like a dear little baby to love?' 'Oh, yes, mother, wouldn't that be lovely? I can give it my Teddy.' Off he went and brought Teddy back, and put it in the cot. Teddy meant a lot to Gavin, so I said he could keep Teddy till the little baby came. 'No, you see, it might wake up when I'm not here, and then it wouldn't have Teddy to look at.' So Teddy was left there for three or four days. Every morning he asked if the baby had come yet, and always made sure by looking in the cot. Sometimes Teddy was taken out for a little, but never taken away, until Nurse told him Nan was too small for Teddy. He grasped the opportunity straight away to be the big brother. 'And I'm big now, aren't I?'"

A youngest child is never dispossessed, and any truth that there may be in the fairy tale idea that the youngest is fortune's favourite may spring from this fact. At one of our Free Kindergartens the teacher was impressing

on a little person the joy of having a baby sister. Yes—yes—yes—but “she sleeps in ma’s bed.” Gavin was lucky in this that a new cot was provided for the newcomer; but his conduct shows that with proper preparation even the bed might be freely given. A friend of mine noticed her little girl one day trying to climb into the baby’s cot, thus showing how gladly she would take his place. A nurse once told me that the elder of her two little charges suggested to her that they should take the baby out and drop it on the car lines. A good riddance, she thought. Some children actually attack the baby, and cases are on record where serious injury has been done. Such children are not really more vicious than others; they are the victims of wrong training and adult imbecility.

Position in the Family. People sometimes wonder that children of the same parents brought up in the same surroundings, and by the same methods, are often so very different from one another. To understand this difference we must realise clearly that not only may the innate endowment be different, but also that the social environment is different, varying both with sex and with position in the family. In a family where boys are wanted, each fresh girl that arrives is a greater dis-

appointment than the last; and similarly when a girl is desired, a boy from the first is under a cloud. Even when nothing overt is said the child senses the situation, and his character may be largely determined by it. Whether he accepts it or reacts more or less violently against it probably depends in large measure on the balance of his instinctive tendencies. The eldest son and the eldest daughter have each privileges and responsibilities, but as the family increases in size each newcomer finds greater difficulty in finding and establishing a niche for himself

Moral and Emotional Training. The findings of modern Psychology prove conclusively that the wise treatment of the emotional nature during the toddler period is of profound importance. A physical injury insignificant in maturity may be extremely serious if inflicted on a developing organism; similarly a mental injury dating from this tender period may permanently weaken or distort the personality. In these early years emotion is not balanced and restrained by reason and experience. The little child is susceptible to emotional storms of an intensity which in adult life is scarcely found except among the insane. It is true that these childish storms appear to pass and to leave no trace. They may, nevertheless,

induce a habit of reacting to certain situations in what, to say the least of it, is a very un-intelligent and irrational way. Otherwise, perhaps the very violence of the manifestation renders it innocuous.

There is some reason to think that more dangerous for the future may be those emotional experiences which find little or no outlet in physical manifestations. A fear, a jealousy, a shame which is hidden may give rise to a permanent weakness which in certain circumstances will bring about a serious breakdown in later years. We still know too little about the inner life of the child to be dogmatic about the way in which such scars are produced, but it seems certain that a common cause is the expression by some adult of horror or repudiation of some conduct which on the child's part is perfectly innocent.

If we are to train a child properly one of the first necessities is that we ourselves should be able to accept that child as he is. Children have many interests, attitudes, and modes of behaviour which are not acceptable if carried on into maturity. With regard to these, strong condemnation or punishment is entirely out of place, and may serve to rouse an unwholesome curiosity or to create an obsessive impulse. Any question that a child asks should be answered truthfully, even if, as of course is

often necessary, superficially. Any undesirable activity should be unobtrusively stopped, negatively by not giving it opportunity and positively by directing the child's energy into approved channels. For example, in many children the eating of dirt is a troublesome habit which probably arises from the normal tendency to put anything in the mouth being accidentally exercised on some unusually unsuitable material, the mother, suddenly discovering what baby is doing, seizes him and tries to get rid of every particle of the horrible, disgusting stuff. His mother's excitement makes a deep impression on baby, who repeats his conduct the next chance he gets.

There can be no doubt but that at an extraordinarily early age a child likes to have the attention of other people focussed on himself. A very common method of securing this attention, as noted on page 122, is the refusal of food. Such refusal is often carried to such an extent as to be a source of extreme worry to the parents, who often coax, threaten, punish in vain. Yet the remedy is easy. Cease to fuss. Set his meal before the child, leave it for a reasonable time; if he does not take it remove it in a quiet, matter-of-fact way and let him wait for the next. Give no food between meals, but in cases where the regular hours are far apart, a light lunch of biscuits

and milk, or some such simple refreshment may be interpolated. As soon as the child realises that he is perfectly free to eat or not eat as he chooses, and that no one appears to mind which he does, his natural appetite will assert itself.

The moral training given to the little child should be as unemotional as possible. In particular we should avoid both praise and blame as causing the child's attention to focus on himself—a process for which he is not ripe. The immediate purpose of our training is to establish moral habits—cleanliness, good temper, ready adjustment to the demands of reality, independence, caution, reasonable self-confidence, courage. Truthfulness and a respect for the belongings of others should also become habits. Intellectual development is necessary before they can be apprehended as virtues. If hostile habits are established in early youth, it is hard for any one to build up a moral character, no matter how clearly he may later come to perceive the desirability of truth and honesty.

The question of punishment is a difficult one. Some people say that our instinctive tendencies are such that in the interests of education actual physical pain must be inflicted to warn them away from wrong routes. As the mother cat slaps her kitten when she

disapproves its conduct, so perhaps may the human mother slap her baby. Postponed or even deliberate punishment in the case of little children is, I think, wrong, for the chances are ten to one that the child will not understand the real reason of his punishment. In the early years punishment must be administered solely with the object of reforming the offender. The quick slap sometimes does that. The child forgets the slap, but the pain associates itself with the blameworthy act and prevents it presenting itself as an attraction. The postponed punishment is apt only to arouse resentful feelings, and may lead to repetition of the act. On the other hand, if the child really understands the relation between the punishment and the offence, if he accepts the adult attitude towards the offence, then he is already reformed and does not need punishment.

CHAPTER VI

PLAY

Play and Work. The two words, play and work, are often contrasted in the same way as black is opposed to white, or good to bad. We believe that they represent two modes of activity sharply distinguished one from the other. It never occurs to us that there can be any difficulty in saying whether a person is playing or working. Childhood we regard as pre-eminently the period of play, and some people even assert that the child, before he goes to school, plays all the time.

When we come to look more closely into the matter, we find that the contrast is by no means so clearly defined or so marked as we had thought. The same activity—for example, pushing a wheelbarrow or hitting a ball—may to one person be play, to another person work; indeed, to the same person it may be play at one time, work at another. The distinction is perhaps to be found in our attitude towards the activity. Yet play is not always free,

work is not always compulsory; play is not always pleasant, work is not always unpleasant. All we can say is that play is more often free, more often pleasant than work is. In work also we have an end to attain. We proceed along a determined path, looking neither to the right nor to the left until we have attained our goal. In play, at least in many forms of play, the end often changes as we go, and it matters not if we never arrive. A certain irresponsibility attends the activity. Our attitude is playful, not serious.

These two contrasting attitudes are known to us all, as occurring in our own experience. It is not a case of children being always playful, adults always serious or in earnest. Indeed, when we come to observe a little child closely what often strikes us is his serious attitude towards life. Children take their play seriously; it is comparatively seldom that they are in playful mood.

Observation of animal life often throws considerable light on child activities. Let us for a moment consider a kitten when we pull along a cork in front of it. The kitten crouches, darts, pounces. It evidently is seriously anxious to seize the cork. Its aim is clearly defined and steadily followed. Contrast this behaviour with what we observe when we turn the little creature on its back and tickle it. The kitten

becomes playful. It has no longer any serious purpose. It lends itself to the happenings of the moment and gives itself up to pure enjoyment. In the little child we see also these two moods. The playful mood is seen most commonly when some one is acting on the child. When mother makes her fingers creep up baby like a little mouse and tickle his neck, when father taps his cheek and nods to him, or rolls him over on the floor like a puppy, then we see the infant's solemnity break up into a smile, he gurgles and bubbles over with fun; he becomes playful.

This playful attitude is a relaxed attitude; it may therefore be recreative. When it is too well defined or too prolonged, it produces in the child a kind of excitement which is disintegrating and unhealthy. Observation shows that babies even before they have reached the walking, speaking stage, may "go to pieces" when carried away by this playful spirit. I have seen a sensible baby in such circumstances simper, giggle, carry on in a silly manner which reminded me of nothing so much as the loss of control evidenced in certain circumstances by a drunken man. Relaxation had certainly in that case been carried too far.

Most of the spontaneous activities of the child to which we give the name of play are,

as I have said, serious activities. They may be considered under several heads.

Sensory and Motor Play. During the first three months babies take an active interest in sense experience. They study faces intently and persistently, and are attracted by other striking objects, such as the face of the clock; they listen to sounds, and indicate preferences; some of them will even at this early period respond to a note sung with an echo of it. Touch experience is pleasant, and the little hands may often be seen to rub themselves back and forth on various surfaces. Taste and smell seem also to be valued as experiences; a baby will seek another sample of a taste that has made him grimace.

A baby's sensations are not, of course, co-ordinated as ours are. The touch of velvet, for example, does not mean to him velvet; it is a special kind of experience to which he gives himself entirely without any reaching out beyond the actual mental process of the moment. For this reason it is probable that a baby's sensations are different from ours, perhaps more intense, perhaps more highly differentiated. The following reminiscence is at least suggestive: "I was not more than two years old when an impression occurred to me which remains vivid to this day. It

seems, indeed, as if impressions of touch were at that age more striking than those from the other senses. I say this from observation of others beside myself, for my own case is peculiar in that matter. . . . On the occasion I refer to, I was carried down a flight of steep back stairs, and Rachel (a year and a half older than I) clung to the nursemaid's gown, and Elizabeth was going before (still quite a little girl), when I put down my finger-ends to feel a flat velvet button on the top of Rachel's bonnet. The rapture of the sensation was really monstrous, as I remember it now. These were our mourning bonnets for a near relation, and this marks the date, proving me to have been only two years old."¹

During these early investigations the child's attitude is serious, intent; he is evidently deeply concerned to find out the characteristics of the strange place in which he finds himself; he is exercising his intellect the whole time; he is working rather than playing. Everything serves him as material for study; but, as he grows, some care should be devoted to giving him a variety of typical objects. This is what Dr. Montessori has endeavoured to do in the material which she has provided for early sense training.

¹ Autobiography, Harriet Martineau. Quoted from *Children and Childhood*, Niemeyer.

During this period not only has the child to exercise his mind on his sense experience, he has also to make a beginning in acquiring skill in the use of his bodily organism. Marvellous is the amount of exercise spontaneously taken by the infant. I have watched a three months' child lying on her back and kicking for a full hour at a time. This, I daresay, is no record. All such movements are accompanied by what are called motor sensations. It is through them that we come in time to make purposeful, skilled movements. It has been suggested that the clumsiness of the partially paralysed child is largely due to the fact that the brain injury from which he suffers prevents his having clear sensations of movement, so that it is very difficult for him to learn to make the best use of what muscular power he has.

During the first weeks of life the limbs themselves suffice as toys. But as sight and touch come to work together, things suitable for handling should be provided. Balls, blocks, paper, pieces of stuff, strong bottles with glass stoppers, a doll, animals made of rubber, spools and many other things will provide material for experimentation, and for finding out the properties of matter and of space. By arranging these things, by piling one on the other, by throwing them, the child gains

skill; until one has watched his unsteady little fingers one scarcely realises that building one cube on another is a real test of manual dexterity.

The question of the type of toy and the question of the number of toys that should be given to our children are extremely important questions. A two-year-old maiden surveying the presents heaped upon her at Christmas time by admiring friends and relatives said bluntly, "Paula doesn't want all zese sings." Wise child! But the wisdom of Two sometimes passes into the unwisdom of Five or Six, or Fifteen or Sixteen, when the new is always the desirable, and when there is no drinking deep of any spring, Pierian or otherwise. The tremendous enrichment of the environment that Science has brought about in our day renders it all the more necessary to guard the children lest they become mere reflectors instead of creators.

With respect to the type of toy, mechanical toys are not suited to the little child. They are not understood by him, and so tend to make common what is wonderful, and to prolong the childish attitude of acceptance of miracle. It is really degrading to the human mind to use any mechanical contrivance of which the principle is not understood as far as may be. From his blocks, which should be

of different shapes, sizes and material, the little child gains a practical acquaintance with the laws of balance and stability. Such toys as a strong substantial engine made of wood, a wheelbarrow suited to the size of its owner, a doll's perambulator, a "kiddy-car," produce familiarity with the practical import of that wonderful invention the wheel. Some toys are valuable because they help language and knowledge of the world, e.g. a model farm, a Noah's Ark. Others train the eye towards appreciation of colour and design, e.g. cubes and mosaics, very simple jig-saw puzzles.

Some people of recent years have thought children should not have warlike toys, drums, pistols and guns, swords, soldiers, cannon, etc., in case such toys should develop in them a warlike spirit. In view of the importance now attached to all influences which play upon the young child it would be a rash person who would laugh away such a suggestion. At the same time the traditions of our race are such that there is more hope of sublimating than of eliminating the fighting spirit. Positive teaching which will tend to bring about love and respect for people, no matter what their colour or their tongue, can easily be given, and should be given in the early years. Such teaching will help to bring about that sense of the brotherhood of man which will

be at least one of the factors in the passing of war.

The early play with things of the little child is suffused with thought. During this period a framework is being constructed into which all subsequent experience will be made to fit. One might perhaps say that what are known later as axioms or self-evident truths are the discoveries of the infant. In other words, axioms are axioms simply because of the utter yielding of the embryonic mind of the little child to the suggestion of experience. That no two things can be in the same place at the same time, that things remain where they are placed unless some external force is brought to bear upon them, that things and people have some sort of continuous existence of their own apart from us, are examples of the unconscious hypotheses which at this stage become part of the very fibre of the human mind.

Attitude to life may also, more largely than we realise, be determined by early play activities. Success in the little tasks a baby spontaneously sets himself, and the pleasure engendered by that success may induce in a child not naturally very persistent a habit of perseverance. When a mother sees that her child's attention is concentrated on some activity she should refrain from interrupting. It is through such concentration that

the child develops and strengthens his own personality.

As baby becomes able to walk and run and climb, the play becomes more active and perhaps less thoughtful. Little boys, more than little girls, I think, often tumble over one another like puppies. I have watched a little boy about three years of age rolling and tumbling with a dog of about his own size apparently on terms of perfect equality. The dog used his teeth to pull and nip the child's jersey; after a time a harder nip on the arm made the boy cry; the dog sat a little away from him on the grass apparently puzzled at this behaviour of his playfellow. While I do not think any special purpose is served by this rough-and-tumble play, yet so long as it is accompanied by enjoyment and does not cause over-excitement it does no harm. When carried on in the open air it is probably conducive to physical well-being.

Social and Imitative Plays. Even in the first year the child loves to play Peep. Throw a cloth over his face, and then pull it away; or put a veil over your own face and let him pull it off. Noteworthy is the delight that this simple game awakens in him. Later, the running child will play Hide and Seek with a zest which shows that the game satisfies some

deep-seated need. He will imitate the household activities of his mother or nurse. He may be assigned special things to dust, or he may be given a little basin with some water and two or three spoons to wash. We easily see that it is not the child's aim to get these things done. We dust furniture because we wish it to be dust free; we wash dishes because we wish them to be clean. The child, on the contrary, dusts for the sake of dusting, and washes for the sake of washing. He will contentedly wash the same spoon over and over again. This is why we say the child is playing, while we are working.

The social value of those imitative plays is very great. All children love to be regarded as mother's helps; and if patience and good sense have been shown in his training, a three-year-old can be a real help. A child who is brought up during these early years to have everything done for him, and not to do anything for others, is having a bad start in life.

Of the early play, perhaps indeed of all play, repetition is a great feature. Freud has emphasised the "repetition compulsion" as being even more fundamental than the pleasure principle on which he lays such stress. Again and again tirelessly the child pursues the same simple sequence of activities. This repetition probably serves the purpose of consolidating

the child's achievements. At the same time, in the case of less enterprising and intelligent children, repetition seems sometimes to exercise such attraction that it makes their actions mechanical, and so retards progress. Some plays become like rituals in that they do not give satisfaction unless they are done in exactly the "right" way. Wrapping up something in a piece of paper and presenting it to us was a favourite play with Margaret when she was about three. One day she wrapped up forty-eight bricks one after the other, and even then showed no sign of being tired of the occupation.

Dramatic Plays. Obviously no hard-and-fast line can be drawn between imitative plays and dramatic plays. The difference is one of degree. In dramatic play we find imitation, but the imitation is subservient to the child's interpretation of the facts of life. In dramatic play the child enters a world which is more or less detached from the real world and more or less released from its laws. The child creates, and in this fact may be found both the value and the danger of this kind of play. The level on which creation takes place depends evidently not only on such personal qualities as intelligence, ability, initiative, but also in large degree on knowledge and experience.

We see this plainly when we think of the first builders of bridges or makers of machines. Unless in their work they observed the laws of their material, they met with failure. Where the creation remains in the realm of thought, success is easily attained; the flying horse of the Arabian Nights has no long toilsome history behind it as the aeroplane has. Castles in Spain are easily built. At a surprisingly early age many children find out for themselves their ability to create in this way, and experience the delight that is to be obtained from this exercise of man's supreme gift. But just as the active oxygen to which we owe our life has to be a small proportion of the air we breathe lest it burn out our energies too soon, so pure creation divorced from the test of reality must, for safety's sake, be allowed to form only a minor part of the child's activities.

An illustration will perhaps make my meaning more clear. A little girl was playing on a verandah with a large doll and a go-cart. She placed the doll on the seat and began wheeling it round. It gave trouble by constantly slipping down and so threatening to fall. The child, after several re-arrangements, took out the doll and in its place put a large stone which she noticed lying on the ground. She then continued her walk, letting the stone represent the doll. Inadvertently knocking

against a pillar, she caused the stone to fall out. She put it aside, and continued her play with a purely imaginary passenger. The next step—a step which was not taken—would have been to leave the go-cart behind; the next to have sat down, and done the whole thing in imagination.

This example shows us the child progressively detaching herself from reality. Creation like this where the brakes provided by reality are thrown out of action has on many children an intoxicating effect. It excites them; it manifestly gives them great pleasure; it is a form of dissipation which sometimes becomes a serious menace to intellectual progress.

When a group of little children take part in the play contact with reality tends to be better preserved. At all events, the art of getting on with others and learning to adapt oneself to their wishes and impulses is being practised. To some extent emotional reactions are made which may have a preparatory function. Family plays are illustrations. In one of our Free Kindergartens in such plays a certain little boy was always father. "Thomas," said the teacher to me, "is very domesticated." In such plays remarkably good imitations are sometimes noticed. The words, the tone of voice, the mannerisms of parent or teacher may be reproduced with

extraordinary exactitude. Such imitation is unconscious on the part of the child. At this period of life there is in many, possibly in all, children a power, which has been well called *identification*, of losing their personality in that of another, and behaving as that other would behave. Possibly the world's best actors are so because they have retained this characteristic of the child. Many adults suffer vicarious pain; if a mother, for example, sees a gate slam on her child's hand, she may feel an acute pain in her own hand, thus identifying herself in a remarkable way with her child.

Dramatic play is not only guided and informed by the child's experience; it also affords an outlet for impulses, and a means of satisfying needs which in modern conditions are not gratified by what we may call real life. In this way we explain the easily observed fact that the child's play is often directly opposed to his experience. For example, a little boy who has never seen anything but the most kindly treatment of animals may lash and beat his toy horse with fury; a little girl to whom corporal punishment is unknown may bring up her doll family with the utmost severity and many whippings. The will to power which at certain periods in childhood has little scope thus finds a harmless outlet in play. In such plays real cruelty to another

child may take place, and this calls for careful treatment. In the case of the little child it is a great mistake to attempt to arouse in him any sense of sin or feeling of guilt. In some children, even at the early age of which we are thinking, such feelings may be very strongly awakened; nor is it difficult to perceive that they give the young sinner a certain wonder at and pride in his own extreme wickedness. He feels that he is not as others are, and this is extremely gratifying. The best plan then is to treat the cruel action as a childish error of judgment. We might in some cases think it wise to inflict the same pain on the culprit as he has inflicted on his companion, but this should be done not in anger but to let him realise the nature of his own act. Better, perhaps, is it to encourage the performance of some kind act so as to compensate for the injury. Best of all, perhaps, if possible, is it to let the children settle the matter themselves; adult interference often makes too much of such incidents, and sometimes signally fails to do justice.

Games. Games differ from plays in that they have fixed rules. This is one of the factors that make them such a valuable element in early education—indeed, in all education. Consciously and of set purpose to obey the

rules of a game means both intellectual grasp and self-control. Before the age of three, games are scarcely possible, and during the whole of the pre-school period they have to be of the simplest nature. When Margaret still lacked two or three months of three, we were living in a house with a big square hall. One day I began rolling a ball to her across the hall, and she rolled it back to me. As she stood with her little legs apart, I began to try to send the ball between them. If I succeeded in this, or if she succeeded in sending the ball similarly directly to me, I said, "Good shot!" if not, I said, "Bad shot!" At that time Margaret certainly understood Good as meaning approbation, and Bad as meaning disapprobation. But I scarcely think she realised the goodness or badness of the shots as dependent in any way on herself or on me. She took no credit for a good shot and no blame for a bad shot. Both gave her equal delight.

Similarly with "Puss in the Four Corners." A little child neither appreciates nor regards the rules, yet loves to take part in the group activity. Often an older child will like to take baby's hand and share her place with her. In this way the little one's development may be hastened. Simple singing games like "Here we go round the mulberry bush," and "Lubin Loo," are perhaps most easily learned. By the time a

child is five, he should play many games. Dominoes, card games like Grab or Beggar-my-Neighbour, Letter games, Tig, I spy, Hide and Seek in various forms, Tom Tiddler's Ground, and many more not only add to the child's joy in life, but play a notable part in his education.

It is now universally recognised that play has a biological value. It gives training for life. It conduces to mental and physical well-being. The child needs play as much as he needs food. One day Margaret (2.9) had induced her mother to provide her with needle, thread and a piece of muslin, as she wished to sew. Very soon she decided she hadn't time to sew. Naturally she was asked: Why not? "I must play a litty," she said seriously. The saying was true. It is the child's business to play. The animal mother, instinctively recognising its value, encourages the play of her young. The human mother must learn to look at play as an educative force and to use it as such. Human life proceeds on a much higher plane than does animal life. The child's play should develop not only his physical powers but his intellectual, emotional, and social capacities. Compared with that of the animals, his play period is a very long one—indeed, in the case of many human beings—and these not the least well endowed of our race—

the play tendencies remain strongly marked throughout life. Because of the potentialities within the child—potentialities so immeasurably beyond those of any mere animal, because of the range of human interest and achievement—much more can and should be done in providing opportunity for the exercise of his play tendencies than has to be done in the case of any other creature. The determination of the child's environment is largely in the hands of his mother. It is her duty to see that in that environment are found suitable toys, pictures, music, poetry, dancing, tools, machines, books, and companionship. At the same time the environment must not be so rich that it stifles the child's spontaneity. Especially in the case of the little child, the mother must make haste slowly, never attempting to force the pace, or to impose attitudes or modes of thinking which are foreign to the child's stage of development. Such imposition his suggestibility renders fatally easy.

CHAPTER VII

LANGUAGE LEARNING

"WITH no language but a cry"—this is the first state of the human infant. Yet the cry can express a considerable range of experience and emotion. There is the angry cry, the wailing, sleepy cry, the hungry cry, and the cry which is simply a pleasant mode of exercise. Just because the child is alive, he experiments with all his muscles, and finds a variety of modes of self-expression. Not many weeks pass before we find him producing coos and grunts many of which are weighted with meaning. Then comes the babbling stage when articulate syllables are formed and produced over and over again. I remember Patricia being brought home in triumph one evening with the announcement that she had said Mum. She was invited to say it again. She seemed to understand what was wanted, for she made the most violent mouthings comic to behold, but she wouldn't or couldn't or didn't succeed in uttering any sound at all.

When the babbling stage sets in properly there are often special times of day when the new accomplishment is practised. On waking from sleep or on being laid down to go to sleep some little ones amuse themselves with the fascinating sound of their own voices. Margaret used to orate with evident jubilation and much waving of her hands when perched on her father's shoulder after tea. For days we would have much repetition of the same sound, then another would be substituted for it. So far as we could make out the method of producing the sounds was a spontaneous discovery on the part of the child. Imitation played no part at all. This observation is confirmed by the fact that deaf babies babble.

Sometimes, however, imitation, conscious or unconscious, does play a part. The stream of sound coming from the child develops intonations and inflections which cause it to seem at a little distance like actual talk. It is very likely that when this happens the child has noticed other people and has not yet realised the secret of language. For him the activity is in itself a joy, and he takes for granted it is the same for others. Sometimes his babble ceases altogether for a time when it begins to dawn on him that sounds have meaning.

A very interesting stage through which perhaps most children pass is the stage of gesture language. One day when I placed Patricia on her high seat, she indicated to me that the chair was hurting her little bare legs. I lifted her down, and said, "Run and ask mother for the shawl." Back she came with it in a moment. I said to her mother afterwards, "How did Baby tell you what she wanted?" "Oh," was the reply, "it was very funny; she kept pretending to sit down."

When Margaret was at this stage reference was made in her hearing to her nurse. She promptly passed her hand across her hair as much as to say "I know; you are talking about the person who brushes my hair for me." This gesture might very easily in default of speech have become a conventionalised sign for Nana. Tylor tells us that "in the daily intercourse of the lower races, gesture holds a much more important place than we are accustomed to see it fill, a position even encroaching on that which articulate speech holds among ourselves."¹ Perhaps the gesture stage in infantile life is simply evidence of the tendency of the individual to recapitulate the racial history.

Language learning has two aspects—understanding the speech of others and expressing

¹ *Primitive Culture*, Vol. I p 164

one's own ideas in spoken words. The understanding of intelligent babies is often far in advance of their power of expression. They will apparently grasp the meaning of quite a complicated sentence when they can scarcely speak at all. For example, one morning a new nurse took Margaret out of my arms, the child loudly protested; nurse put her back, and then said, "Come with me, and I will show you the baba." The invitation was promptly accepted. Again Patricia when being wheeled in her go-car had made trouble by pushing her spade in between the spokes of the wheel. "If you do that again, baby," said her mother severely, "I'll take the spade away from you." Patricia sweetly handed her the spade as if thinking, "I know temptation will be too great for me, so you had better have it at once." Any number of similar examples might be obtained. They do not, of course, show that the child understands the separate words as we do, but they do show a grip of the situation indicated by the words that is often astonishing.

The beginnings of a more analytic understanding show themselves in the way a baby will react to familiar sounds, which occur in the middle of adult conversation, which, as a whole, must be just a stream of sounds to the child. Thus, once, when the talk turned

to the Training College, Patricia, who had apparently been paying no attention to what was being said, ran up and remarked: "Puff-puff" Here, of course, there is no realisation of the meaning of what is said nor of the situation as a whole, there is simply mechanical association of a sound with an element of a previous situation of which the sound had formed a part. Nevertheless, this tendency to make mechanical associations is extraordinarily useful in increasing vocabulary and in unifying the child's world.

It is often said that the first words used by a child are really equivalent to sentences. They express desires and judgments. This is largely true. At the same time names as such give a very real satisfaction to babies. Patricia would spend a long time lifting her treasures one by one from her toy box so that her mother might say the name of each. Similarly Margaret would sit on my knee for long stretches of time in an attitude and with an expression of concentrated interest, if I would name to her the different things and parts of things in a picture book. Later, just to name things when she saw them evidently gave her pleasure. It may be said that this naming was really a judgment, that "apple," for example, meant "That is an apple." It seemed to me, however, that the saying of

the word showed an appreciation of the fact that word and thing belonged together rather than a decision that the thing belonged to a certain class of things; that is, that we had here simple naming, not judging.

Along with or perhaps a little later than the mechanical association of word sounds with things or actions comes a tendency to translate what is happening into words; thus, I playfully blew on Margaret's (2.2) arm one day; she looked amused, and said slowly and deliberately, "Ahtie bo' baby ahm." About the same time she was beginning to use language definitely for the purpose of communication. She was sitting on my knee and I was telling her mother how in our early morning walk she had fallen and raised a great bump on her forehead. Baby became quite excited, leaned forward and said slowly and impressively directly to her mother, "Baby fa' pa'." i.e. Baby fell on the path. In Margaret's behaviour in those early years one used often to see signs that she, to some extent, understood the tremendous import of a new discovery she had made. That language should enable us to let some one know what has happened in the past is really a very wonderful discovery.

At this stage Margaret was beginning to show signs of the development of that very

interesting phenomenon of childhood—the accompanying of any activity by continuous chatter, a chatter which is, to some extent, descriptive of the activity but is not directed towards any one else. Consider this sample uttered while the child was wandering about with pencil and paper sometimes herself trying to draw, sometimes letting the different people in the room draw for her: “Mamma daw. Mamma daw. Mamma daw. Baby daw A. Baby daw A. Baby daw A. Mamma daw A. Baby daw. Tat wawa (water). Baby ahm. (A daisy bracelet had fallen off her arm) Mamma daw. Mamma daw. Baby daw a daidy. Daidy nong ta’ (long stalk) Daidy. Daidy baby ahm. Baby daw. Baby daw.” And so on in continuous flow. A couple of months later the chatter is still characterised by many repetitions but shows increase of vocabulary and of ideas. The child is sitting at the table playing with a little iron. “Baby ironing. Dot sleeves. Dot sleeves. Baby ironing. Baba sleeves. Dat sleeve. Baby ironing dat side. Baby ironing baba’s s’irt. Where baby ironing ’tand? Down on floor dere. Mamma dot it. Baba put on her dress. Not iron dat yet. Baby put her iron on the floor. What a matter dat sing? What a matter dat sing? Dat’s it. Dat’s it. Baby drop her iron on the floor. Baby make it nice and hot,” etc., etc.

Here the introduction of questions is interesting. But such questions are seldom real questions, that is, they do not demand an answer. They are expressive of the child's thought or attitude.

This continuous chatter obviously serves a useful purpose in giving the child command over language. Is it a constant phenomenon of childhood? I have been told of one child who drew incessantly, and my informant assured me that he did not develop the phase of continual chatter. One would be glad of more evidence on this point. I have seen it maintained that visualisation as a means of thinking develops because parents begin to find the child's noise disturbing and force him to suppress it. He then discovers the quieter method of representing his thoughts. On the other hand, visual thinking is very generally regarded among psychologists as a more primitive method than is verbalising. More extensive study of the chatter of very young children might throw light on this question. I certainly thought that Margaret's power of visualising lagged far behind her power of representing or reviving her experience in the form of words.

Bright children pick up words with marvellous ease, and have for them a most retentive memory. Often in the second year many

nursery rhymes can be repeated, although the sense of these must be quite obscure to the reciter. The memory is pure sound memory. The language a child uses is not, however, purely imitative. In the third year or sooner we find that he has discovered the secret of the 'past tense, of plurals, of gender, etc. He makes his own past tenses, as *frowed*, *gove*, *hood*; his plurals, *foots*, and he may make pointed inquiries regarding the correct use of the pronouns, *he*, *she*, etc. A little later he boldly creates words to serve his needs. Thus, at three and a quarter John exclaimed, "Look, what a glorgeous carpet!"; and again, "See, there's a lady cigaretting", "This does ache my arms," said Margaret, busily tucking in the bed clothes, and again when she saw a horse and cart in the road, "Where is his wo-man?" (the driver).

A child learning his mother tongue is not just learning language. The task he is engaged on is much more fundamental. He is acquiring a special mode of thought—a mode of thought which has been found effective in reducing the rich and inconceivably complicated universe of which man finds himself a part to an ordered system which can be grasped by his intellect. Words are labels for things. In the case of those words which grammarians call Proper Nouns, the label denotes one thing only.

Common nouns are labels which apply equally well to many things, all of which possess certain qualities which are similar. Thus, a boy may be large or small, thin or fat, dark or fair; but all boys have certain qualities which form the meaning of the name. When a child has sifted these essential qualities from the accidental ones found in particular instances then he has possessed himself of a general idea or concept.

Little children are sensitive to likenesses between things. This sensitivity helps them towards the formation of concepts, but does not necessarily cause them to select those likenesses which have established themselves as the central nucleus of the concept. Hence, children often perceive analogies which we pass over because our thought and even our perception are limited by the accepted meaning of the word. At this stage every child shows something of the poet's faculty of extending the meaning of words, by stressing a likeness not previously accentuated. Thus, of the husk of a strawberry Margaret said, "Is that its little petticoat?" A similar phenomenon is found in savages. Tylor tells us that the Australians called our books "mussels," because their opening and closing reminded them of the behaviour of a mussel shell.

In childhood, names spread from one thing to another in two ways. The first is the way of likeness, and has just been illustrated. The other is the way of contiguity, as when a child calls a sheet of water "quack" because he saw "quacks" on it on a previous occasion. From our adult point of view such words are usually wrong, and they drop out of the learner's vocabulary as he gains possession of the right terms. Such special words should not be adopted by those who are about the child, for this tends to delay his entry into social life. For the same reason we should not imitate his baby talk, but should set before him good speech models.

There are some words that parents should watch for as being in a special way indicative of developing mentality and grasp of the nature of the world in which our life goes on. Thus, the correct use of the first personal pronoun shows that the child is beginning to realise himself as *a* centre, but not *the* centre. "In you go," we would say to Margaret (2.2) as we lifted her into her perambulator. "In I go," she would cheerfully respond. According to the standpoint the same person is either "You" or "I." So does the study of relativity begin. Time words, *to-day*, *to-morrow*, and space words, *here*, *there*, are words with the same quality, and their correct use indicates a much higher

level of thought than the correct use of simple name-words.

Again, colour terms present a difficulty to the child. It is pretty certain that the development of the sense of colour is a gradual process, in some cases very gradual indeed. Probably at first the baby's world is black-and-white and various shades of grey, so that his attention is forced towards form. A little child may know his blue shoes not because he knows the colour blue, but because he knows the shoes with pompoms are called his blue shoes. Yet it seems likely that a child may distinguish colour well, when he is still extremely erratic in naming colours. The difficulty here experienced compared with the ease with which other names are learned is surprising, and difficult to account for satisfactorily. It does not seem to be due to any lack of interest in colour or liking for it, as mothers are practically unanimous in asserting that their babies at very early ages show marked preference for coloured toys.¹

Parents should notice when the use of interrogative words first shows itself—particularly

the words Where, When, and Why. About the fourth year children often go through a period when it seems to their harassed guardians that practically all their remarks begin with Why. Sometimes, it is true, such questions have not much meaning, and can be left unanswered; at other times they take the form "Why not?" and mean, "Why should I not do what I am doing or wish to do?" At still other times they do express a real desire to penetrate to the connections of things, though it is true that this desire is easily satisfied by almost any statement put forward as an explanation.

It is a task of great interest to obtain the vocabulary of any child at various times during the early years. The method employed is to make a note of every word used during a certain period, say ten days. Every effort should be made by means of pictures, walks, visits to different places to stimulate the child to use all the words he knows. Twenty-six sheets of paper, one for each letter of the alphabet, are prepared, and the words noted down on the appropriate sheet. If a word has two meanings, the sense in which it is employed should be recorded; if it is used in both senses it should of course be counted twice. Similarly a word that is used correctly both as a noun and a verb should count as

Two. Irregular past tenses, e.g. gave, bought, should rank as independent words.

Intelligence is generally recognised as a potent factor in determining extent of vocabulary. The bright child takes an interest in all that goes on around him, and picks up words with amazing ease. Obviously, however, the words must be there before he can possess himself of them. A vocabulary test will never gauge the intelligence of a young child who comes from a narrow and illiterate environment. Again, vocabulary, if measured by the words the child uses, is not a test of intelligence until the child has mastered the art of speech. If it were possible to discover the number of words that a child understands then the test of vocabulary might be applied at a much earlier age, and larger figures would in most cases be obtained. Even in adults the understanding vocabulary is usually considerably larger than the speaking vocabulary; and some little children have a very extensive power of understanding before they begin to speak at all. In these cases the vocabulary appears to grow very quickly after speech is established.

Gerlach¹ presents the size of fifty-three recorded vocabularies of young children. Of

¹ *Vocabulary Studies Studies in Education and Psychology*, Colorado College, No. 1, 1917.

these fourteen are between six and eighteen months and may be called the one-year group; twenty-nine are between eighteen and thirty months and may be called the two-year group; six are between thirty and forty-two months, and may be called the three-year group; two are four years, and two are five years. The one-year vocabulary ranges from one word to 232 words, the median being $12\frac{1}{2}$, the two-year vocabulary ranges from 28 to 5,000,¹ the median being 263, the three-year vocabulary ranges from 327 to 2,282, the median being $1,190\frac{1}{2}$. The averages of the four and five year old vocabularies are 1,445 and 4,118 $\frac{1}{2}$ respectively, but these figures may not be really representative, as the cases are so few. Taken altogether the figures show that the pre-school period is a period of very rapid increase of vocabulary, and suggest that one of the most important functions of the Nursery School is to provide words which the children so readily absorb.

A question of some practical importance is how far in these little people we should encourage "parrot speech." One of my students gave me the following list of nursery rhymes repeated one evening almost word perfect by her little niece (3.4) Little Bo-Peep, Little Boy Blue, Little Miss Muffet, Little Jack Horner,

¹ This is a very exceptional case, the next highest figure being 1,227.

Jack and Jill, Humpty Dumpty, Hey, Diddle Diddle, Baa, Baa, Black Sheep, There was a Little Girl, There Was An Old Woman, Old Mother Hubbard (1st verse), One, Two, Buckle My Shoe. It is pretty certain that a considerable number of the words used in these rhymes had little or no meaning to the child. To her, "Hey, diddle diddle," was just as soul satisfying as "sat on a tuffet." Are we not prolonging the age of unreason by encouraging the use of such incantations? Perhaps the answer to this question is the answer that we have to give so often in the case of little children. It is. We must watch the individual. It is, perhaps, not good for any one to form a habit of using words without meaning. On the other hand, as the child's experience increases many of the words and phrases in the rhymes will attract experience, and so meaning, to themselves, and thus be a real factor in the enrichment of his life. One can act many of the rhymes and so to some extent avoid mere verbalism.

A group of words which are important as giving clear indication of advance to higher planes of thought are the number words. Children seem to vary a good deal in their rate of progress in the understanding of number. Dr. Rusk says that about nine months elapse before the child who has attained the

idea Two succeeds in grasping the idea Three. We are so familiar with the number way of looking at things that we find it difficult to know where the obscurity is for the child. It is probable that he is so engrossed by the sensible qualities of single objects that he finds it hard to realise any property as not residing in any one object but being the property of the group as such. Children's questions and remarks regarding number should be noted down and considered. "Is this one Four?" the child says, touching the fourth bead. Some children recognise small groups before they can count, others can count before they recognise. Probably much counting and group recognition must be done before a child really possesses himself of the concept of number. Parents should do their utmost to prevent their children being hurried through this stage. They should be encouraged to count, and they should be taught games involving the knowledge of number; but it would be an advantage to every one if all formal instruction in number were banished from the curriculum of children under seven.

Speak distinctly. A very important practical direction to all who have anything to do with young children is, *Speak distinctly.* Margaret was fairly fortunate in her speech environment, but at an early age she was found

to be saying "must of" instead of "must have," and to be confusing "piano" with "banana." Confusion of thought must result from such confusion of sound.

Children of two or three years of age can in a favourable environment easily be taught the names and sounds of the letters of the alphabet. Thereafter they take pleasure in listening for the sounds, and picking them out of our talk. This exercise must not be confused with spelling, because of the unphonetic character of our language, but it is a good preparation for spelling, and causes the children to look upon the letters with friendly interest. A child so prepared will have a general attitude which will help him greatly when the time comes for him to go to school.

The ease with which the child picks up words in his early years makes it possible to lay the foundation of all knowledge at this time. Some people—teachers, perhaps, more than parents—are curiously eclectic in the words they offer to a young child. Few hesitate to let him hear and use the words, elephant and hippopotamus, which delight him greatly, but they teach him to call a circle, a round, and a rectangle, an oblong; calyx becomes a little green cup and pollen becomes golden dust.

The causes of this eclecticism may be numerous. The chief one, I am convinced, is found

in the habitual speech of the parent or teacher. A word which is a little difficult or unfamiliar to ourselves, we hesitate to offer to a child. Here, as in many other places, we are blind to the essential difference between the adult and the child. An adult's language learning power has passed its zenith—has often set altogether; a child laps up words as the natural food of his mind. They enable him to build the world within himself.

So long as words are the names of things or actions or of perceptible qualities, give the correct terms freely. Do not mind their length or even their difficulty of pronunciation. Do not, however, teach the words; use them in the child's hearing, and in close connection with the things they stand for. In many children inhibition is aroused when a word is pressed upon them and the state of never being able to remember that particular word is induced.

By five years of age children should talk well and clearly, forming well co-ordinated sentences and showing mastery over a large variety of words. From the intellectual point of view perhaps the greatest disadvantage that attends the child who is born of poor parents in a congested area of a large town is the poor chance he has of acquiring good speech habits. It is difficult or impossible for the teacher

who receives him with a crowd of other little ones at five years of age to make up for the time already lost. The close dependence of mental development on acquisition of vocabulary renders it highly desirable that Nursery Schools should be provided for all children coming from more or less illiterate homes.

CHAPTER VIII

THE CHILD GUIDANCE CLINIC

THE perfect training of any child is ever an aspiration rather than an accomplished fact. There are, however, certain groups of children in comparison with whom the child whom we call normal stands out as a well-trained child. The most important of these groups are mentally defective children and delinquent children. To these we may add two other groups—children who are markedly backward in development or in learning, and children who are of such superior intellectual endowment that they fit in badly with their contemporaries in school work. These groups are not mutually exclusive; the child who is mentally defective or feeble-minded is practically always backward in educational achievement, but the backward child is not always feeble-minded. The delinquent child may be either feeble-minded, backward, normal, or even superior in intelligence. As society has come more and more clearly to realise its responsibility for

the young, so more and more clearly have the problems presented by these children stood out as a challenge and a menace. It is only now that we are beginning fully to realise the magnitude and nature of these problems. So long as the children appeared as isolated cases, so long as the delinquent child appeared before a magistrate accustomed to deal with adult crime, so long as the high grade defective child found a place in the ordinary school population, treatment was bound to be haphazard, nor was any comprehensive view of the situation possible.

It was naturally in the great centres of population, in the big cities, where the best and the worst of the human species are found in close proximity, that the problems bristling around these exceptional children were first focussed. More than twenty years ago, in 1904, Dr. John Thomson opened a clinic for mentally defective children under the auspices of the Royal Hospital for Sick Children, Edinburgh. As many of the patients attending this clinic remained in regular attendance for many years the case histories accumulated by Dr. Thomson are of the greatest value. Children brought first in infancy because they were not sitting up or noticing, like others of their age, were carefully followed through the years, and advice was given suited to their age and

progress. Some attended school, others special schools, others were cases for home care or for institutional treatment. Cases of speech trouble or of extreme educational disability, such as word-blindness or word-deafness, might appear. Cripple children, not defective mentally, were often examined to see what work they were fit to undertake. Conduct cases—stealing and other misdemeanours—were sometimes presented, especially of recent years when for various reasons attention has been drawn to the delinquent child. Cases were referred by school medical officers, by social workers, by medical practitioners in Edinburgh or in outlying districts. Sometimes as the clinic became known a mother would bring her child on the advice of a neighbour. On the death of Dr. Thomson in 1926 the work was taken up and carried on by Dr. Charles McNeil. Altogether since its inception up to 1928 approximately a thousand children have been treated at this clinic.

This clinic was in fact, though not in name, a real child guidance clinic for a selected group of exceptional children. Dr. Thomson's primary interest was in the mentally defective child, and especially in the mentally defective baby, for he fully recognised from the point of view of treatment the enormous importance of the very early years. Problems of conduct are

often entirely dissociated from mental defect in the specialised sense of the term, and it was becoming abundantly clear that there was urgent need for a clinic which would deal with aberrations which were psychological and educational rather than medical. In 1922 the Research Committee of the Scottish Branch of the Howard League for Penal Reform undertook an investigation of children who had been birched by order of the Court, the result of which was to emphasise the crying need of psychological examination in the interest of the child delinquent. Partly as an outcome of this work, Dr. Drever, Combe Lecturer in Psychology in the University of Edinburgh, opened in 1925 a clinic to which any child offering problems of conduct or of educational or mental retardation might be referred. Between this clinic and that still functioning at the Sick Children's Hospital interchange of cases could and did take place.

In 1926 a similar clinic was instituted in Glasgow by Dr. W. Boyd, Lecturer in Education in Glasgow University. During the two years of its existence about a hundred cases have passed through this clinic. More than half of these are accounted for by difficulties in the ordinary school subjects, notably reading, spelling, and arithmetic; speech defects account for nearly a quarter, and behaviour problems

for about a seventh. At the present stage of such work as this it is obvious that the nature of the cases dealt with will be largely determined by opportunity and interest. This clinic is in intimate relations with teachers in the schools, which probably is the reason for the large proportion of educational disabilities; a clinic fed by an active social worker or by probation officers would certainly show a larger proportion of disorders of conduct.

It is to America that we must look for the full history and development of the child guidance movement. Owing to the clash of national ideals, the difficulties of language, and the constant flow of immigration, the problem of citizen making is a much more difficult and insistent problem there than here. It was in Chicago, through the efforts of a group of women interested in the child delinquent, that there was founded in 1909 the Juvenile Psychopathic Institute, now known as the Institute for Juvenile Research. The Head was Dr. William Healy, now widely known and honoured for his pioneer work. His publications made known to an ever growing public the need for scientific treatment of the maladjustments of childhood. The next important step was taken when in 1918 Mrs. Stephen V. Harkness, who died in New

York City at the age of eighty-eight in March, 1926, established a Commonwealth Fund "for the welfare of mankind." The resources of this fund were early directed towards the psychological study of maladjusted children, and courses were provided for social workers interested in this special field of research. Child guidance clinics were established for demonstration purposes in various localities, which clinics have after a time been taken over and continued by the local communities. The staff of such a clinic comprises psychiatrists, psychologists, social service workers, stenographers and a secretary.

Meanwhile, in this country the isolated movements in the direction of child guidance, to some of which reference has been made above, were gathering head, and coming within range of one another. Dr. Hamblin Smith, of Birmingham, published his book, *The Psychology of the Criminal*, in 1922, and Professor Cyril Burt's magnificent work on mental and scholastic tests and on delinquency in childhood was commanding universal attention.

The great increase in functional nervous disorders which was one of the products of the war developed a better understanding of such cases and a greater sympathy with the sufferers. It was realised that early treatment was of paramount importance, and might often

prevent an incapacitating breakdown. Clinics for such cases have been established in connection both with general and with mental hospitals in London and in the provinces; and in some of these there is a special clinic for children. The Tavistock Square clinic, of which Dr. H. Crichton Miller is honorary director, was attended by 126 children as new cases during the year 1926-7. Recently the Jewish Health Organisation has inaugurated a clinic in the Jewish free schools in London, which is conducted on lines similar to those of the American child guidance clinics.

It was through a visit of Mrs. St. Loe Strachey to the United States that the Commonwealth Fund became interested in the British movement for the promotion of mental hygiene, and the psychological study of difficult problems of childhood. As there was no specific body in existence in this country which united all the interests involved, there was formed the Child Guidance Council, under the Presidency of Sir Humphrey Rolleston, Professor of Physic in the University of Cambridge, and a former President of the Royal College of Physicians. The vice-president is Mrs. St. Loe Strachey, J.P., and the Council includes among its members psychologists, educationists, physicians, magistrates, and social workers, along with representatives of

various Associations (educational, medical, and social) while nominees of the Home Office, the Board of Education, and the Board of Control have been appointed to act in a consultative capacity.

The Commonwealth Fund agreed to finance the Council up to the autumn of 1928. It further undertook

1. To meet the expenses of several well-known persons selected for observational visits to the States.

2. To meet the expenses of five social workers undertaking a year's training in America.

3. To arrange for the Secretary of the Council to spend three months in the States, and if a child guidance clinic is established under the auspices of the Council to arrange for the psychiatrist and psychologist appointed to the clinic to make similar observational visits.

4. To meet the expenses for one year of two social workers in existing psychiatric clinics in England in order to encourage the development of social work at such clinics.

The visitors were much impressed by what they saw in the States, particularly by the value of the combined work of psychiatrist, psychologist and social worker. This "team

work," so characteristic of America, is only in its infancy here, particularly do we lack the light which can be thrown on difficult cases by the trained social worker. Hence, arrangements have been completed for establishing the clinic referred to above. The staff has been appointed; the London County Council has agreed to recognise it as a school clinic, and it was opened in the spring of 1929. It is hoped that this clinic will act as a centre for practical training, for which there is so much provision in the States, and so little provision here. Of the absolute necessity of fully trained workers every one who has any knowledge whatever of the nature of the work is convinced. The questions which come up at the clinic are delicate and complicated questions, and unskilled interference may easily do more harm than good.

When maladjusted, difficult or delinquent children are spoken of, people usually think of boys and girls in their teens. The storms and stresses of adolescence have become a byword; and peaceful progress through that period is almost regarded as an abnormality. The inner conflict and external rebellion so often found are set down to the physical changes taking place in the organism; the attitude even of sympathetic elders is one of patience and resignation to the inevitable.

As young children have to work through measles, whooping cough and other ailments which are regarded as the necessary concomitants of their years, so later they have to pass through the crisis of adolescence.

Those people who still cling to this view will find it hard to see why any account of child guidance clinics should be given in a book devoted to the psychology of the pre-school child. Surely, they will say, the baby difficulties of these little ones are no subject for scientific consideration and analysis

Our justification for including the chapter is not, however, far to seek. Every investigator engaged upon child guidance work finds that when he attempts to discover the cause of the difficulty or disability of which complaint is made, he is forced back along the history of the individual to the very early years, when a wrong turn was taken or a wrong attitude adopted. The misunderstandings and inner repressions of childhood are in many cases the root causes of breakdown and failure in later years. Often the effective causes have been forgotten; it takes time, patience and skill to revive them and bring about the needed readjustment. Had the trouble been tackled, and brought out into the open, at its first beginning, it would never have become so serious. It is apparent, then, that lack of

harmony between even a three-year-old and his environment is not always to be regarded as a passing phenomenon of no particular account: it may be the initial warning of tendencies which, if left to themselves, may lead on to disaster.

That great observer of little children, Dr. Montessori, has said that children on entering school are at the mercy of inhibitions and impulses of which they have little understanding and as little control. Sometimes the mothers have as little insight as the child, and their favouritism or injustice, unconscious often on their part, may do incalculable permanent harm.

For reasons of prevention as well as of cure it is very desirable that the resources of the clinic should be made available to all parents. A mother who has brought up six children will sometimes tell you that the seventh is like none of the others; she never saw a child like him. The psychologist who interviews two or three hundred problem children per annum has probably seen dozens like him, and that fact, when properly stressed, is in itself often reassuring. Even the most prolific parent has really a very limited experience of the ways of childhood.

In America there are certain clinics which are specially devoted to the interests of the

young child. These are known as Habit Clinics. Of these clinics Dr. Letitia Fairfield, Divisional Medical Officer, London County Council, one of those who visited America under the auspices of the Commonwealth Fund in order to see child guidance work as carried on there, says: "In Boston and the neighbourhood the Habit clinics, supervised by Dr. Thom, are enjoying great popularity. The State of Massachusetts Department of Mental Diseases runs eight such clinics with two psychiatrists, under the general supervision of Dr. Thom. He himself conducts three other clinics in Boston, supported by private agencies. At one of these the new cases amounted to nearly three hundred a year. . . . In dealing with these pre-school children one noted that although methods are generally the same as with older ones, a simpler procedure appears desirable. Less social field work is required both in history taking and for treatment. The personal contact of the psychiatrist with mother and child is all-important. Relationship with the schools is, of course, much less vital. For these and other reasons one ventures to suggest that the administrative separation of clinics intended for older and pre-school children might be desirable. A simple beginning might be made by arranging for a 'mobile unit,' including doctor, psychologist,

and social worker, to hold a weekly session at one of our nursery schools."

The results of these clinics are, according to Dr. Fairfield, very encouraging. This she attributes largely to the personal qualities of Dr. Thom, to his acceptable handling of the little ones whom he often saw quite alone, and to his tact and patience in dealing with the mothers.

The realisation of the necessity of making scientific studies of the young child has advanced much more rapidly in America than with us. In connection with certain universities, Nursery Schools have been established avowedly for experimental and observational purposes. For several years the Merrill-Palmer Nursery School at Detroit has been doing most valuable work on the relation of nutrition to diet, and more recently on the effect of the Nursery School régime on the development of intelligence. At Yale Dr. Arnold Gesell has added to his clinic a guidance nursery, with a specially screened alcove which enables observers to watch the behaviour of children absolutely unconscious of the proximity of any adult. As its name suggests, this nursery serves not only as a laboratory for research but also as an adjunct to a guidance clinic. A child brought to the clinic is first of all examined with the view of estimating his intelligence and his personality

make-up. This examination is followed by a period of observation of the child in the nursery either alone or with other children. By taking her place in the observation alcove the mother may obtain fresh insight with regard to her own child. A conference follows, and a mode of treatment suited to the individual child is devised in the light of these observations.

It seems probable that the next few years will see a great development of guidance clinics in this country, if, as may be anticipated, success attends the London Demonstration Clinic. Success does not, of course, mean that there will be no disappointments and failures. At the outset of the work we must face the fact that there are cases in which heredity and environment are both so unfavourable that little can be done; on the other hand, we have ample evidence to show that good heredity is often discounted by environmental conditions which can be modified when their import as factors in the conduct of the child is fully realised. To give a simple example: A parent may be so much worried by a child's stammer that he unwittingly increases the nervousness of the child and so retards his cure. Or a child's "stupidity" may be an unconscious defence against over-domination on the part of his father.

A child guidance clinic may be associated with a hospital, with a school or schools, or with a court, or may be run independently of any of those agencies

The head of the clinic may be a medical man, a specialist in mental and nervous troubles, or a psychologist with special knowledge of educational psychology. In America the custom seems to be to have the psychiatrist as the director, while the psychologist and social worker are subordinate to him. For this arrangement there is something to be said. The public is accustomed to regard a doctor with confidence, to speak to him frankly, and to expect help from him. In virtue of his professional qualifications and his intimate relations with his patients, he has from the outset a standing which it is not easy for anyone outside the profession to attain. Moreover, his special knowledge is essential, if only, in many cases, to rule out certain possibilities.

On the other hand, the great majority of the cases which seek the help of the clinic are not medical cases at all. They are cases which demand psychological insight and a knowledge of modern psychological methods. They demand also understanding of and sympathy with children, and the power of winning their respect and affection. They demand intimate knowledge of school conditions and

acquaintance with the psychology of learning. Probably the director should have had teaching experience, so that he may know from the inside class-room conditions. It is certain that the clinic will not be able to demonstrate its capacity to help unless it is countenanced in its beginnings by the Education Authority, and supported by the teachers. The staff of the clinic must be fully in sympathy with the teachers, and must have an intimate knowledge of the difficulties of their work. To a very large extent "school" determines the conditions of a child's life from the age of five to that of fourteen; and a large proportion of a child's development is profoundly affected for good or for evil by his relations with his teachers and his companions during these impressionable years.

In her book on special abilities and disabilities Augusta Bronner says: "Results of not attending properly to children who have special disabilities are often serious; they lead to loss of interest in school work in general, to discouragement and feeling of inefficiency which frequently lie at the root of disciplinary problems. The step from this to truancy is easily made, and from that to more serious delinquency. Educational dissatisfaction is a very frequent beginning of what may develop into a long career of misdeeds. From our

studies of delinquent children we believe that misunderstanding and neglect of children with particular abilities and disabilities leads to truancy, and thence to consequences the seriousness of which is too little appreciated."

To determine the causes of a child's educational disabilities and to prescribe remedial treatment requires an expert knowledge of educational psychology. During the last twenty years or so an immense amount of work has been done on the psychology of learning; standards have been worked out, tests have been devised, complicated processes, such as the reading process, have been analysed, and the normal course of progress ascertained. The usefulness of intelligence tests is generally recognised. Tests of practical ability, of emotional nature, of character are being sought out. It seems undesirable that to the already overcrowded medical curriculum there should be added a course giving instruction in these technical matters. Degrees in education are now attainable in many universities, and it would seem natural to look in this direction for the personnel, and particularly for the directors, of our guidance clinics. At the beginning of a new movement, at a time when one may say only pioneers are in the field, it is a mistake to erect too many barriers. One thing is certain—that the clinic must act in

conjunction with all other agencies affecting the child; it must know the school and the home; it must be in touch with the girl guide movement and the boy scout movement; it must know the churches and the picture houses and the playing fields; it must study the temptations and the opportunities; in a word, it must deal not with any one aspect of the child but with the whole child.

CHAPTER IX

THE NURSERY SCHOOL

THE work of the Child Guidance Clinic is preventive as well as remedial. Its aim is to remedy bad, and to prevent bad from becoming worse. Nowadays, so far as our bodies are concerned, we aim at health. Just as soon as the body deviates from the path of health we take steps to put it right. Whether the case is one of defective eyesight, of tuberculosis, rickets, cancer, what you will, we know the importance of early treatment. Procrastination renders cure much more difficult, perhaps unattainable. We go further. We try by means of fresh air, sunlight, rational diet, rational clothing, to create an environment in which the seeds of disease will not flourish. We seek to prevent catastrophe before it has even begun to happen. And we are succeeding. There seems no doubt that even during the last few years the health of the nation as a whole has enormously improved.

To some extent, but only to some extent, mental health correlates with physical health. Mental health is an expression which we all think we understand until we begin to ask ourselves what it means. We then find that the concept is not an easy one to define. Probably most people would agree that, the person who is healthy-minded is happy, nor is his happiness very dependent on outward circumstance. He is a Mark Tapley sort of person, he looks on the bright side of things. One is often impressed by the amount of misery there is in this world on account of things that don't happen; on account of illnesses that blow over, on account of failures that don't take place, on account of railway and motor accidents that don't occur, on account of the deaths of children and others who do not die—at least, when they are expected to do so. Some people take pleasure in stirring up their emotions in those ways, but one can hardly call such people healthy-minded. Again, the healthy-minded person is possessed of himself; he can command his own resources; he is not crippled by shyness, nor does he lose his temper. He is not suspicious of others nor distrustful of himself. He has a sense of humour, and a certain—not always formulated—philosophy of life.

We have said that the physical health of the nation as a whole is on the upgrade; it is by no means certain that the mental health of the nation as a whole is keeping step with it. Sometimes, indeed, it seems as if our high civilisation and all the education on which we pride ourselves were factors tending to increase those mental troubles which to-day assume such protean forms. A great teacher, Sir William Osler, thus laments: "How many have I lost from the student band by mental death, and from so many causes—some still-born from College, others dead within the first year of infantile marasmus (wasting), while mental rickets, teething, tabes, and fits have carried off many of the most promising minds. From improper feeding within the first five fateful years, scurvy and rickets head the mental mortality bills of students. To the teacher-nurse it is a sore disappointment to find at the end of ten years so few minds with the full stature of which the early days gave promise."

Mind and body are partners between which there is action and reaction; yet Osler is right in his implication that each has its own independent life; and even in infancy the hygiene of the one can to a considerable extent be separated from the hygiene of the other. The mind as well as the body requires freedom to

develop, and must have the food best suited to its stage of development. If improper feeding during the "first five fateful years" of student life produces that mental scurvy or rickets which cuts short the career of many promising minds, how much more fatal must improper feeding be in the susceptible years of childhood. We have done much during recent years to spread wide and far the knowledge of the material food that is suited to the infant; we require also to spread wide and far the knowledge of the specific mental nourishment which will best meet its growing needs.

It is not, I think, sufficiently realised that the most important work of the world—the care and culture of the young of the human species—is entrusted to untrained workers. We often hear people exclaim how foolish it is to allow any one to drive a motor car who has given no proof of efficiency. But to become a father or a mother one does not require even a license. Yet to direct a child in the way he should go is surely a harder task than to direct an automobile.

Of course I shall be told that we trust to the mother's instinct, which I suppose means the mother's love. I shall be told that the home is the proper place for the young child.

Words are often an opiate for the conscience, a soothing syrup which enhances our natural indolence.

It is true that most mothers love their children; it is not true that love can take the place of knowledge. Nor under modern conditions can a loving mother provide for her child all that is requisite for his physical and mental health. He requires space where he can safely run and play, he requires toys with which he can experiment, he requires song and laughter and an outlet for his overflowing energy; he requires contact with the green earth and exposure to the sun and air.

Sir George Newman tells us that besides the definite physical troubles which are found to a disquieting extent among the five-year-olds entering our national schools, there is a large and indefinite group of nervous conditions affecting the sense organs or even the whole nervous system of the child due to *the stresses and strains of life*.

What are the stresses and strains of life which produce such grievous effects on people who are supposed to be as care free as the flowers which neither toil nor spin? It does not require a very vivid imagination to see what life must often be to the child of the slum. His "home" consists of one or two

rooms up a common stair, the window overshadowed by another building far too near; his mother has to buy the food, prepare the meals, mend the clothes, make the children ready for school, look after the baby, satisfy her husband. There is no privacy, no quiet. If death visits this household, the coffin lies on the table where as a rule the meals are spread. Neither the pangs of death nor the pangs of birth are hidden from the child, who sees all things, uncomprehending but observant. He is not an actor, as he ought to be, but an onlooker. In this home there is no real place for him. The curse of drink is perhaps on the household, or the curse of angry words and hasty deeds. Sometimes he shrinks in terror; at other times he dominates the scene with his baby rage. Emotions, not reason, rule the "home." No wonder the children suffer from "the stresses and strains of life."

The emotional attitudes thus engendered—fear tendencies, anger tendencies, secretive and deceitful tendencies—remain with the child as a permanent part of his make up. They remain with him to sap his initiative, pervert his inclinations, cripple his energies. So common are the disabilities thus induced in the course of infantile experience that most people regard them as being inherent in human nature.

Probably not one human being in a thousand has escaped Unskilled is the potter; rare the unblemished pot.

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This century shows the blossom of that stirring of the public conscience with respect to children, which characterised the latter half of last century and was helped to such a notable extent by that great lover of childhood—Charles Dickens. Free Kindergartens, the forerunners of the Nursery School, began to appear. The first was opened in January, 1900, in the mission room of a Woolwich church; the second in 1903 in the Canongate of Edinburgh. The Kindergartens were the result of voluntary effort. The real meaning of childhood was beginning to be understood, and the bitter tragedy of that murder of the spirit of childhood which was going on all over the land was beginning to be realised. Not on deaf ears had fallen the words of Charles Dickens, Lord Shaftesbury, Mrs. Browning.

"The young lambs are bleating in the meadows,
 The young birds are chirping in the nest,
 The young fawns are playing with the shadows,
 The young flowers are blowing toward the
 west—

But the young, young children, O my brothers,
They are weeping bitterly!
They are weeping in the playtime of the others,
In the country of the free."

Money was forthcoming, and in a hall here, a room there, in the most crowded and squalid districts of our cities, groups of little children gathered round a teacher-nurse who renewed within them the springs of life and happy laughter.

Precarious ventures were these little schools, for they had no financial aid from public money. They were for the most part entirely dependent on voluntary subscriptions. They were carried on by devoted workers whose work and life were one, and they served as models to initiate and to guide the performance of a task which in its magnitude demands the resources of the nation.

From another quarter the cause of the children received support. The falling birth rate was giving rise to anxiety which was not relieved by the appalling figures showing the infantile death rate. Infant Welfare Centres were established, and health visitors began their beneficent rounds. The babies responded well, and infantile mortality decreased. This was encouraging, but a good start is not everything. If you are going to die when you are two, you may just as well, or probably better,

die when you are one. Statistics for the decade 1891-1900 showed that while town babies died at double the rate of the country babies, town toddlers died at four times the rate. Urban conditions thus pressed more hardly on the toddlers than on the infants. It was realised that something must be done to make these conditions more endurable. It was poor economy to save the babies only to let them die when they had reached the rank of toddlers.

The toddler dies largely because he is not interested in life. The world at this stage is by no means his "oyster"; it is too big, too complex; more and more he retreats from it, and the final retreat is death. According to statistics, he dies perhaps of bronchitis, perhaps of measles. But what renders him susceptible to the seeds of disease? The reason is that he has never strongly laid hold of life; he has not built up in the time that has been his a strong, healthy, resistant organism. Unsolved, unattempted he gladly leaves the riddle of life, and with scarce a sigh gives himself to the arms of the dark angel.

To save the toddler is the mission of the Nursery School.

The Education Act of 1918 (England and Scotland) contains clauses giving Local Education Authorities power to establish Nursery

Schools for children over two and under five, whose attendance at such a school is necessary or desirable for their healthy physical and mental development. In England under certain conditions grants in aid of such schools may be paid by the Board of Education; in Scotland the giving or withholding of financial aid rests with the Local Authority.

There is no doubt that all over the country there are little children in urgent need of such schools, but in view of the economies demanded after the war, Authorities were unwilling to embark on fresh expenditure. In 1928, ten years after the passing of the Act, there were in England twenty-three Nursery Schools recognised by the Board of Education, and providing for 1,340 children. The largest number of children (265) is found in the Rachel McMillan School in Deptford; the smallest number in any one school is thirty. In Scotland there are twelve Nursery Schools, or Free Kindergartens, most of which have about thirty children. The Local Education Authority is responsible for three of those, the Public Health Authority for one; special Committees for the rest. As the importance of early training comes more and more to be realised we may expect a great increase in the provision made for the under-fives.

In 1923, under the Presidency of Miss Margaret McMillan, the Nursery School Association was founded with the object of "making more widely known the work already achieved by Nursery Schools and their claim to public support, with a view to ensuring that the Clause in the Education Act of 1918 providing for Nursery Schools shall be carried out effectively." By the conferences and lectures it has arranged, by the literature it has printed and distributed, this Association has done a great deal to unify the forces working in the interest of the young child and to awaken public opinion in his behalf. It has also kept careful watch on proceedings in Parliament which might affect the situation, and by deputations, appeals, and letters has sought to obtain Government support, or at least encouragement, for Authorities desirous of establishing Nursery Schools.

The Association has also put forth a statement of policy in which it lays down the general conditions with regard to premises, staffing and curriculum that should be fulfilled by any Nursery School. Open air conditions are recommended, the bungalow type of building being satisfactory. The educational nature of the work is emphasised. There should be at least one specially trained and certificated teacher for every forty children; there should

also be at least two full time Helpers, who may be young girls to whom the training which they obtain in the handling and care of little children will be of inestimable value in their after life.

It has been pointed out that by the Act of 1918 Local Authorities have power to establish Nursery Schools; they are not compelled to do so even where the needs of children are most clamant. In 1927 the Nursery School Association passed a resolution to this effect: "That this Association desires to see the Nursery School Clause in the Education Acts of 1918 and 1921 so amended as to make it incumbent on the Local Education Authorities to establish Nursery Schools within their areas." Such an amendment would not, of course, make it incumbent on parents to send their children. No one at present proposes to make education compulsory for the under-fives. It would simply give parents an opportunity to secure for their children conditions necessary for their health and well-being which at present they themselves cannot provide. It would not relieve parents of the responsibility of their children. It would to some extent emphasise it, for it would rest with them to take advantage or not of the opportunity offered by the school. When a Nursery School under a competent and sympathetic

Superintendent has been for a time established in any crowded area the mothers are quick to show their appreciation. A waiting list is soon necessary, and a child may be entered as soon as he is born or even before birth.

Nor do the children themselves lag behind. In an Edinburgh Kindergarten there was pointed out to a visitor a little boy who had "battered himself in"; there being no room for him, he had haunted the doorstep till he was able to turn the handle of the door himself; thereafter it was impossible to keep him out. Another small child, who at the age of five had passed on to the "big schule," returned every day to demand, "Have ye no a place for ma wee sister to-day?" till at last wee sister was crowded in.

There are two objections to Nursery Schools which seem even to people who would like to see them provided to be objections of considerable force. The first objection is the expense; the second is the danger of the spread of infectious ailments when little children are gathered together in groups. Measles and whooping cough are the scourges of the Infant Department; why risk the more delicate life of the younger child?

The answer to the second objection is this. It is simply not true that the Nursery School

child is in greater danger than the street child of infection by measles or any other disease. In all Nursery Schools the greatest care is taken of the health of the children, and any child who is suspect is promptly isolated. The comparatively small number of children, the conditions which make it possible for each child to be seen each day by the trained eye of the Superintendent, render an epidemic less likely in the Nursery School than in any other. Facts come to the aid of theory. In Miss McMullan's Deptford School the incidence of measles has been reduced almost to vanishing point. So far as infectious disease is concerned the open air Nursery School is safer than the street or the home. Moreover, it builds up the physique of the child so that he becomes more able to resist the germs of infection which are sure to come his way.

The question of expense is a serious one. The nation already spends a large sum on education; why add to this burden? There is an old adage which says: A stitch in time saves nine. Perhaps we can ill afford the time and energy necessary to put in one stitch; but if that is the case still less can we afford the time and energy necessary for nine stitches. Practically all the children of the nation now pass through our elementary schools. Some of these later form an over-

whelming proportion of the population of our prisons. In 1920 it cost about £150 to maintain a convict for a year, it cost approximately £100 to maintain a young offender in a Borstal institution for the same period. About £12 per head is the expense of a Nursery School. Not a despicable figure, it is true; but is it not possible that the Nursery School may represent in many cases the "stitch in time"?

Among the Nursery Schools which are already in being there is considerable variety. In the Rachel McMillan open air school the children come early and stay late. They have three meals taken in open shelters, or, when the weather is suitable, right out in the garden. Little children have to learn to eat nicely. Spoons and forks are tools with which they are still but slightly acquainted. Every meal is a learning period, a period when the child practises social etiquette. The little ones themselves carry round the dishes and distribute the contents. They are mothers in miniature. Every Nursery School endeavours to include a meal in the day's routine, not only in the interests of health, but in the interests of social and moral training.

A Nursery School has no set time-table. Yet it has some fixed points—the time of

arrival, the time of departure, the time of the meal, and the time of sleep. In the intervals the children have a great deal of freedom. There is much for them to do. There are toys and occupations. There is perhaps a canary's cage to be cleaned, a rabbit to be fed. The flowers in the vases must be admired and tidied, the garden must be visited, the teacher must be told the news.

Though there are no formal lessons, and the routine seems unstudied, yet the whole environment is educational, and the trained intelligence of the teacher is guiding the development of each child. Sense training apparatus is provided, which to the seeing eye reveals both his need and his progress. It is illuminating to watch a little child working with such material as has been devised by Dr. Montessori. When one sees him vainly but perseveringly struggling to fit an equilateral triangle into a depression shaped like an acute-angled parallelogram, one cannot fail to realise that the eye of the child tells its owner much less than does the eye of the adult. He trains his eye by experiment.

Again, by the actual matching and grading of colour tablets the child trains his eye to colour. At first he does the exercise badly; gradually he comes to do it correctly.

Similarly, with tablets of differing weights, he trains his muscular sense. His attention is held by these exercises, and his perception of differences becomes more and more refined.

Every Nursery School should be supplied with the Montessori apparatus, because it has been thought out and tried out by a scientist with the object of giving the child the minimum of material necessary for him to obtain an all round training of his sensory powers. In other words, the material furnishes him with a straight path towards the goal of his humanity. As we watch him working with it we know at what point he has arrived, and how far he has still to go. The child thus trained has plenty of time for pure play and rejoicing in life. He is not oppressed, as many little children are, by the bewildering variety of things. The apparatus analyses the world for him, gives him a key which he can himself apply to the environment. This material introduces the little child to the fascination and joy of work. He is free to use it or not as he chooses; he is not free to play with it. For play, toys must be provided—toys which lend themselves to a variety of uses. Big blocks are deservedly popular. So are wheelbarrows, dolls' perambulators, kiddie-cars.

Facilities for climbing and a slide should be set up in the open air.

The aim of the Nursery School is to provide an environment which will foster the child's growth. It brings science and skill to help the progress of the race. Now that every city is clearing up its slums, now that hundreds of little houses are springing up in new areas, surely now is the time when the Nursery School should be given its rightful place in our great national scheme of education. In the new areas sites could be reserved, in the old areas sites could be secured, on which shelters might be erected which would give to every child who needs it a haven in which, protected from those stresses and strains which now tell so hardly on his tender youth, he may grow strong and beautiful, a herald of the golden age that is to come.

It is not, of course, suggested that the widespread establishment of Nursery Schools could of itself bring about the redemption of humanity. A child of five may have gone far on the developmental pathway; he may, as psychologists with fair unanimity have begun to assure us, have passed the most critical years of his life, yet he is still a delicate organism, still easily injured mentally, bodily, and spiritually. If, so far, his nurture has been on the right lines, if he

possesses that greatest of blessings, a sound mind in a sound body, the teachers who now receive him have the great responsibility of continuing well what has been well begun.

As has been already noted, young children are now definitely recognised as objects worthy of scientific observation. "A maist mysterious thing's a wean" This homely saying is deeply true. No one with an atom of the scientific spirit in him can fail to be drawn by the mystery of the child. The St. George's School for Child Study at the University of Toronto recently published a series of papers on the observation and training of fundamental habits in young children.¹ In this science of child study it is not possible to separate observation from training, because obviously training must go on. The papers deal with sleeping habits, play activities, eating habits and the development and training of the control of the bladder. The Nursery School, at least certain selected Nursery Schools, are thus more and more tending to become laboratories from which new methods of scientific observation and new knowledge will emerge. It is this attitude of scientific observation that has made Dr. Montessori's work so valuable and enduring.

¹ Genetic Psychology Monographs, Vol IV, No 1, July, 1928.
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She has been content to learn from the children themselves: she has allowed them freely to express in their activities the guiding laws of their development

Faith and patience and clear-eyed vision are the virtues of the scientist. The new spirit in education demands that they become also the virtues of the teacher. In the ordinary schools an environment must be prepared which will guard the child and foster his natural growth. At present the beginners' classes are, as a rule, so large, and the pernicious habit of class teaching is still so prevalent, that a teacher is often unable to discriminate between a well-developed child, well-developed mentally as well as physically, and an under-developed or stunted child. Sometimes even the well-developed child's friendliness and readiness to express himself are thought to upset the "discipline" of the class, a thought which shows how far is the thinker of it away from the scientific standpoint. There are some teachers who never see or know the real child, so intent are they on moulding the half mummified figures in their class rooms into association masses which will automatically respond to given stimuli. When the scientific and loving spirit of the Nursery School permeates the Infant Department, as it is rapidly doing, and when it spreads upward

through the Junior and Senior Departments, then only can we hope to have in our lads and maidens fair promise of that age of peace and good will which, all down the corridors of time, prophets and poets have proclaimed.

CHAPTER X

INTELLIGENCE TESTS

It is much more difficult to test a baby to see if mental development is going on satisfactorily than it is to test an older child. Very often a baby is so engrossed in something else—some affair of his own—that his attention cannot be gained by the examiner, and unless we can secure the attention of the examinee all tests are useless. William James tells of a showman who, when buying monkeys, was willing to give a higher price for them if he was allowed to keep them a few days to make his selection. When asked how he could tell in such a short time which would make good performers, he said it was simply a matter of their power to pay attention. If a monkey, when being taught, is not easily distracted by a fly buzzing in the cage or by other irrelevant stimuli, then he is a promising subject for training. Similarly, a young baby

whose attention is readily obtained makes a favourable impression with respect to intelligence

In the early years the development of intelligence shows itself in the increase in number and variety of adaptive movements and of social responses.

That parents and others interested may form some opinion as to whether a given baby is making satisfactory progress, we set down here a few tests suitable for the ages indicated.

Four Months. Child's eyes should follow white paper moved to and fro or up and down in the field of vision.

Sharp sound should cause child to blink.

When child is laid prone on table he should raise his head.

Should turn towards voice.

If a small object is placed in the child's hand he should clasp and retain it for a few moments; the beginnings of opposition of the thumb may be noted.

Six Months. Place a small object in each hand; child should retain both for a few moments.

Child should give motor response when shown his image in a mirror.

Child should distinguish between friends and strangers.

Dangle a ring in front of and above baby, he should seize it.

Present to him a piece of letter paper; if he refrains from putting it to his mouth, but, instead, explores it with interest, perhaps waving or banging it, this is a good sign.

Nine Months Hold child with feet lightly touching floor; he should give stepping response.

Reaction of pleasure (smile, laugh, dancing movement) on hearing music.

Hold a spoon perpendicularly in front of the child; he should reach for it directly and accurately; he may put it in his mouth, but we esteem him more highly if he does not.

Place a small red cube on the table, attracting the child's attention to it; quickly cover it with an inverted cup; child should lift cup and secure cube.

Child should wave Bye-bye.

Response to verbal directions at this age is a good sign.

Child should say Da-da and Ma-ma.

Twelve Months. Scatter some blocks before the child; build a tower with two or three; invite child to do the same.

Child should now have a vocabulary of four words, besides Da-da and Ma-ma.

Give child pencil and paper; if he does not scribble spontaneously, demonstrate and invite him to imitate; the second reaction is quite satisfactory at this age

Show child box with a small hole in the lid, invite him to explore it with a pencil; give credit if he pushes either the pencil or his finger into the hole.

Child should now stand, and should walk with help.

Eighteen Months Give child a small cube (2.5 cm.) in each hand; offer a third; at twelve months this should be accepted without losing the other two; at eighteen months a fourth or even a fifth should be retained.

Draw a stroke on a piece of paper; child should imitate; now draw a circle; if child attempts to make circular scribble his response is very good.

Place a small rubber whistle doll prone on table in front of child; hit it two or three times so as to produce a whistling sound; child should imitate.

Child should build tower of three blocks in imitation of a model.

Child should be able to use spoon to feed himself without much spilling.

Two Years Child should be able to name common objects, such as penny, knife

Should combine two or three words to form simple sentences. Correct use of pronouns I, you, me, is a favourable sign, which belongs perhaps rather to the three year level.

Should point to objects in picture when named by examiner.

Child should be able to point when asked to two or more parts of his body, e.g. eyes, mouth, nose, hair.

When asked his name should give at least his first name.

Three Years Give the following commands: Put the ball *on, in, behind, in front of, under,* the box or chair. If three of these commands are obeyed correctly it is satisfactory at this age.

Ask child to repeat the following sentence: *I have a little dog.* If failure, the sentences: *The dog runs after the cat,* and *In summer the sun is hot,* may also be used. The test is passed if one sentence is repeated correctly.

Examiner builds bridge of three blocks; child should imitate.

Fold a piece of letter paper across the middle, then again at right angles to the first fold. Give child a second piece of paper and invite him to do same.

Ask the questions, *What must you do when you are sleepy? What ought you to do when you are cold? What ought you to do when you are hungry?* At three one correct answer is satisfactory; at four two are required.

Four Years. Place a cup and several pebbles before the child. Ask him to put one pebble in the cup; then two pebbles; then three pebbles. Success with the first two tasks is satisfactory at this age; success with the third shows superior intelligence.

Place three pebbles in a row; ask the child to do likewise.

Show child a card with a cross on it; ask him to copy picture.

Show a square. Give child pencil and ask him to copy it. Three trials may be given.

Ask child to repeat the following sentence: *The boy's name is John; he is a very good boy.* If failure, the sentences: *When the train passes you will hear the whistle blow, and We are going to have a good time in the country,* may also be used. Give credit if one sentence is repeated correctly or two with only one error in each.

Ask child to repeat the following: 4—7—3—9. Say one figure per second. If failure, give 2—8—5—4, and if necessary 7—2—6—1. One success gains credit.

Place four pennies in a row in front of child; ask him to count them.

Five Years. Show colours—Yellow, Red, Blue, Green. Ask child to name them. All must be correctly named

Ask child to define the following: chair, horse, fork, doll, pencil, table. Say simply: "What is a chair?" etc. A "use" definition, e.g. A chair is for sitting on, is satisfactory. At least four must be given.

Take child to centre of room. Then say, "Now I want you to do something for me. Take this key, and put it on that chair over there; then shut (or open) the door, then bring me the box which you see over there." Point to the things indicated, and repeat the command a second time, stressing the order, thus, *First* put the key on the chair, *then* shut the door, *then* etc. Pass if the three commissions are executed in the correct order.

Have two rectangular cards each two by three inches, of which one is divided diagonally into two triangles. Lay the two triangles on the table beside the uncut card, and invite the child to make the two to look like the one. For a pass two successes are required. Three trials, one minute each, may be given. If the child turns over one piece so that the task

becomes impossible, examiner should rectify the error.

Take ten cubes. Ask child to close his eyes; if he is unwilling to do this, screen the blocks from him while building a stairway of four steps. Show model to child saying, "See, four steps, 1, 2, 3, 4. Can you make one like this? Try." Wait a moment, then knock over the steps saying, "Now you make the steps for me." If task is too hard for the child, it becomes a measure of his persistence in the face of difficulties. If he works for more than seventy-five seconds, he may be regarded as very persistent; if for more than thirty seconds he may be set down as persistent.

Ask child to draw a man. His man should be recognisable as a human figure.

The tests given here have been selected mainly from *The Mental Growth of the Pre-School Child*, by Arnold Gesell, and from the Binet-Simon Scale of Intelligence as standardised by Terman. In extensive investigations of older children Terman has found that the range of intelligence is very great at every age, and is not more wide at fourteen years old than at six. We may be sure that babies of four months have an equally wide range, but in their case it is perhaps less easy to devise

tests which will satisfactorily demonstrate this. We have assigned the given tests to ages at which babies of average intelligence should pass them. Bright babies will, of course, pass tests belonging to higher age levels than their own.

In testing older children there is a standardised procedure by means of which we determine "mental age" and the well known Intelligence Quotient or I.Q. (ratio of mental age to chronological age). When children are re-tested at intervals the I.Q. is found to show a high degree of stability. The question then arises: At how early an age can we obtain a figure which will have prophetic value as regards the child's future? Can we say of a four month's baby whether he will or will not be able to profit by University instruction at the age of seventeen or eighteen? Can we at that time say whether we can reasonably look forward to his taking his place in the world as a manual worker or as a leader and teacher of men?

Possibly before very many years have gone by we shall be able to answer these questions. Meantime we have not attempted to give any exact method of calculating the baby's mental age, nor can we regard the tests as more than a rough measure of his capacity. Nevertheless, they are of real value as indicating to us

whether or not he is developing at a satisfactory rate; for it is during this very plastic period that we can perhaps do more than at any other time to secure that the most shall be made of the child's native endowment. Mothers in particular should realise that the mental growth of a baby should be watched with the same care as his physical growth; and just as with respect to the food for his body they seek all the help that science can give them, so also should they do with respect to the food for his mind.

The great majority of babies are born healthy; they are well born. By the time they come to be five years of age and enter our elementary schools about a third of them are in need of medical attention. We cannot examine their minds so easily as we can examine their bodies; but I think we may be fairly sure that in this sphere matters are not any better. Medical men are beginning to realise that it is a greater thing to keep children healthy than to cure children who should never have become diseased. The resources of our medical service are increasingly being put at the disposal of the pre-school child. Teachers are more and more coming to realise that in the pre-school years foundations are being laid on which they must build. If the child is not ripe for schooling, little will schooling avail. Even

social reactions and attitudes to life may be firmly fixed and wrongly fixed by the time a child is five. All the wisdom of the centuries, all the common sense of to-day, says. Look to the foundations, if you wish the building to endure.